

Atari ST
Amiga
CBM 64/128
Spectrum
Amstrad
IBM + more

ACE

ADVANCED • COMPUTER • ENTERTAINMENT



IS THIS THE 16 BIT BREAKTHROUGH?

In depth play-testing of Mirrorsoft's astonishing new titles



**ALIENS
SIGHTED
IN
CAMBRIDGE!**

**THE
ACE CARD**

Win an ST!
See page 16 for
rules and prizes



DOUBLE TROUBLE

ACE brings you the best in
two-player action

**BUYING A NEW
COMPUTER?**

All the facts you need to make the
right choice - in the Pink Pages

16 BIT AMSTRAD - RUMOURS HOT UP

THE LATEST AND



ARCHON - ROM - £14.99 (Jagged)
A battle between the forces of light and darkness. You can't take a square: you have to fight for it.



BALLBLAZER - ROM - £14.99 (Jagged)
Can you shoot the Plasmorb through the moving goalbeams while piloting your Rotofoil? For one or two players.



RESCUE ON FRACTALUS - ROM - £14.99 (Jagged/stepped and original)
You have to rescue your friends from Fractalus - but the evil Jaggi aren't going to make it easy.



TWILIGHT WORLD, CASSETTE, £4.99 (Jagged)
Battle your way through eleven dungeons and devils with anti-matter pods and lasers.

Atari have always had the greatest arcade games in the galaxy, now they're adding even more winners to the collection. From the high speed skills of handling a W.W.I biplane, to the brain-aching Archon battle of wits. Whether

you're landing the punches with Fight Night or using the awesome power of Thunderfox to blast the enemy, Atari give you the best combination of graphics speed and skill this side of Alpha Centauri.

ALL GAMES SHOWN ARE COMPATIBLE WITH: ATARI XE GAMES SYSTEM, ATAR65X

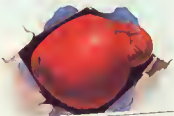
AND THE GREATEST.



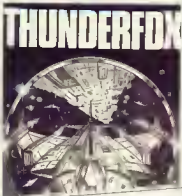
BLUE MAX - ROM - £14.99 (laydisk)
The thrill of WW1 dogfighting and bombing raids

FIGHT NIGHT™

by Acclade



FIGHT NIGHT - ROM - £14.99 (laydisk/box drive optional)
Construct and train your own boxing champ then guide him to the championship. One or two players



THUNDERFOX CASSETTE. £4.99 (laydisk)
The Zyllosen war machine is complete. Can you beat the horrendous odds in your Thunderfox?



COMPILATION CASSETTE. £4.99 (laydisk/layboard)
Five arcade favourites on one cassette! Centipede, Star Raiders, Missile Command, Tennis, Typo Attack

Then there is Atari's compilation cassette of all time favourites, which at only £4.99, makes it, you guessed it, the best value on Earth!

Pick the latest and the greatest from your Atari Dealer or fill in the coupon to order by mail.

ATARI 65XE, 130XE, AND 800XL COMPUTERS.

Please tick title(s) required	Archon £14.99	<input type="checkbox"/> Ballblazer £14.99
Rescue on Fractalus £14.99	<input type="checkbox"/> Fight Night £14.99	<input type="checkbox"/> Blue Max £14.99
Twilight World £4.99	<input type="checkbox"/> Thunderfox £4.99	<input type="checkbox"/> Compilation £4.99
Forward cheque/postal order for total amount accompanied by this order form to: Atari Corp (UK) Limited, Atari House, Railway Terrace, Slough, Berks SL2 5BZ		
Name (Mr/Mrs/Miss)		(AGE 3)
Please complete using block capitals		
Address		
Postcode		
Please allow 2/3 days for delivery		

ATARI

SPECIALS

31 Silicon Spires

Zorch on the ST, the new Spectrum-compatible computer. Alan's transputer workstation - all up and running, and all in Cambridge. Andy Wilson dons cap and gown to investigate.



Jack Lang of Parthellen with transparent add-on board.

36 The Meaning Of Life

Could the aliens in your shoot-'em-up actually learn to fight back? Could they - gasp - undergo a hideous process of evolution and take over your micro? ACE considers some very disturbing possibilities.

74 Strategy Special

Firezone from PSS and CCS' Overlord feature in this month's investigation of the latest strategy software - whatever you dish out, these games won't take it lying down.

70 Double Trouble

Are you a competitor or a collaborator? Do you yearn to knock the stuffing out of your mates in international Karate, or to fight side-by-side in Ikari Warriors? ACE joins the scrum with an authoritative guide to the best in multi-player action.



On per-jokes - two-player goading in ZAXXON.

ACE

INTERFACE

7 News

Amstrad 16-bit machine - the rumours flourish... Major changes for US Gold programming policies... Telecomsoft 'relaunch' Bye-bye Ariola! hello Esotec, Mandann, FTL.

18 Previews

Tomorrow's games strut their stuff on today's pages.



Electronic Arts' FTL spaceship ready for take-off.

97 Letters

A heartwarming tale of how to trade in a Commodore 64 for an ST pops through Uncle Pete's letter-box.

130 The Blither End

Last month's winners - and a few losers as well.

SIGHT...

21 Pixels in Motion

Brian Larkman gives you the low-down on animation techniques and suitable packages for 16-bit machines.

...AND SOUND

51 A Is For Apple...

and M is for MIDI. We continue our plain-speaking guide to the new world of MIDI. Don't be dumb, be noisy!

63 MIDI Panel Of Experts

Mark Jenkins addresses himself to some of your MIDI problems.

GAMEPLAY

43 Screen Test

The most authoritative reviews, the latest games, and the world's most comprehensive rating system. This month, Dungeon Master and Ods cause a 16-bit sensation.



Ferra's Formula One - in the pits, but definitely not the pits.



No pet elephants, just deadly pink worms in side-of-the-art Dungeon Master.

26 Arcade Ace

Pac-who? Haven't we seen this running, jumping, pill-gobbling, ghost-chasing maze wandering globe-bleat somewhere before? What's he doing around in 1986? Find out here.

68 Updates

The latest conversions for your machine. Amiga owners get Mercenary AND Bonecruncher - what do you get?

THE ACE CARD

Page 15 tells you if you've won an ST - one of 34 other mouthwatering prizes. And if you haven't got a card, find out on page 15 how to get your own unique chance at winning some of the best prizes around, every month in ACE.

76 Play By Mail

Second of ACE's occasional forays into the world of play-by-mail. This time we check out the latest PBM convention in London.

85 Tricks n' Tactics

Wotta lotta maps. Feast your eyes on the hideous secrets of *Terramex* and *Phobos*, plus ST pokos for *Backlash*, *Black Lamp* and more besides...

103 Adventures

Itcom's *Sherlock Holmes* isn't exactly elementary, my dear Watson. Plus more on role-playing, *Pats Patch*, *Shades Diary* and a host of other goodies.



Sherlock Holmes - Infocim get back on feet in Victorian London.

BUY LINES

77 Subscription

A superb Spectravideo joystick worth 14.99 - yours absolutely free when you take out a subscription.

78 Special Offers

Not just any games on these pages, but some of the best you can buy. And we're offering up to £4 off!

41 Competition

Barry Norman eat your heart out...Mirrorsoft offer you the chance to win free tickets to the cinema for a WHOLE YEAR!

ACE PINK PAGES

107 Buyer's Guide

Ten leading computers exhaustively reviewed and rated, plus over fifty ACE recommended games for your collection.

124 Random Access

The infamous ACE prize puzzle: plus a crossword and other tidbits to turn your brow. Come on now, you don't think we were going to let you read this magazine and not DO anything, do you?

126 Readers' Pages

Don't ask us what's on them - you wrote the copy. Submitted the adventure contacts, demanded the penpals, offered the software and advertised the users groups. We just gave you the pages, and they're all yours.

O!

...You! This is the ACE Team speaking. Wn wanna hava a few words with you, alright?

We just thought we'd like to tell you that we reckon this magazine is the **best on the shelf**. Yeah, we know, you've heard it all before, but just for the record, we're going to tell you **WHY** we think it's the best.

First off, it's aimed at a **different type of reader**. Someone like you, someone with **brains**, with **discriminnition**...not someone with **nappy-msh**, but a real man-about-town who **knows what hn wants** in a magazine.

You want in-depth, **authoritntivn** reviews, written by people who **rnally know** a good game when they see one, and have the guts to **speak out** when they come across a **stinkn**.

You want a **rnintg system** that leaves no loop-holes, that tells you which game you'll still be playing in a **ynnr's timn**, and which one will end up in the **bin**.

But you want **MORE** than just games, games, and more games...

You want **in-depth features** on the white-hot cutting edge of computer entertainment...You want the **skills** that will turn your monitor into a **blisnting display of pixel mastery**. You want the data that will **transform your humble synth** into a **stain-of-the-art** music machine.

You want the **nnws**, the **pekns**, the **comptntions**, the **previews**, the **spocinl offrs**, the **puzzles**, the **buyers' guidns**.

You want **thn lot** - and we **give it** to you...

So **don't hnsitate** - take this mag to the counter right now. It's the **latest issue** of Britain's **fnstnt moving new micro mngaxinn**, and it's not going to be on that shelf for long.

● The ACE Team

ADVANCED COMPUTER ENTERTAINMENT

Future Publishing

4 Queen Street

BATH BA1 1EJ

☎ 0225 446034

Fax 0225 446019

Telecom Gold84:TXT152

Prestel/Microne1 045 874

Co-editors: Peter Connor, Steve Cooke

Reviews Editor: Andy Witon

Production Editor: Rod Lawton

Staff Writer: Andy Smith

Art Editor: Trevor Gilham

Art Team: Angela Neal, Sally Meddings

Advertisements Manager: Jonathan Beales

COVER PHOTOGRAPHY: Stuart Baynes Photography. Bath ☎ 0225 66343 • SUBSCRIPTIONS (Cairle-Anne Porter) & SPECIAL OFFERS (Christine Stacey) The Old Barn, Somerton, Somerset TA11 7PY ☎ 0455 74011 • COLOUR ORIGINATION: Wesssex Reproduction, 325a Wells Road, Sinsted BS4 0CL • DISTRIBUTION: SM Distribution, 16/18 Trinity Gardens, London SW9 6DX ☎ 01 274 5611/5 • PRINTING: Chase Web Offset, Plymouth • © FUTURE PUBLISHING LTD 1987 • No part of this publication may be reproduced in any form without our permission.



ACT
956
RATED

ATF

ADVANCED TACTICAL FIGHTER



CASS £8.95
C64 DISK £12.95
AM CPC DISK
£13.95

AVAILABLE FOR SPECTRUM, AMSTRAD CPC & COMMODORE 64

Beyond today's technology... ATF... Lockheed's Advanced Tactical Fighter. Climb aboard the aircraft of the century and launch across enemy territory. Attack or evade enemy forces by hugging the 3-D relief terrain.

Engage advanced on-board systems, plan your strategy and swing the balance of power to your favour.

ATF is a unique combination of 3-D arcade action and military strategy, offering an unparalleled challenge.

Are you prepared? YOU have been chosen to fly ATF...

0276 884959

**DIGITAL
INTEGRATION**

Watchmoor Trade Centre,
Watchmoor Road,
Camberley, Surrey
GU15 3AJ



ATARI COIN-OP SENSATION

A Midlands coin-op company has developed a revolutionary coin-op arcade console that promises to close the gap between home computer software and the arcade.

East Midlands Leisure have produced a cabinet based on the Atari ST, but unlike the Arcade Amiga based system, which uses Amiga boards and plug-in chips the EML system loads its games from disk. As a result, almost any ST program can be converted in a matter of hours to run on the machine, and already EML have signed up US Gold's *Tremor* for imminent release. Other titles under negotiation include Palace's Barbarian, some of the best selling infogames titles, and Tynesol's ST shoot-em up *Pluto*.

'Our system is miles better than the Arcade set-up' claimed engineer Alan Nelson. 'They still use of ROM boards which are expensive and can be damaged very easily. Using the disk system we can modify existing software very easily and we've tested the system for seven months without any problems.'

EML also claim that their display will be better than the competition, since they're using a 21 inch Heres Hantares screen as opposed to the TV tubes still in use by other manufacturers.

REVOLUTION

If the Intec Video System (as it's

called) is all it's cracked up to be, it could revolutionise the relationship between the arcades and the home computer industry. Software houses will be able to supply their current hits to EML, who by adding a short routine can make it compatible with the system.

What's more, EML intend to refine software of all kinds on the machines, including simulations. 'We've developed a system,' Nelson says, 'that allows the player to buy time on a simulation program in the same way that you buy lives in an arcade game.' Don't drink and fly could be the message soon, with pub-goers shelling out 20p for a quick light round the Bay with *Fight Sm 2*.

CHEAPER

'The distributors of arcade machines are very keen,' said Nelson 'and our machines are cheaper - between £1200 and £1500 compared to around £1900 for the Arcade systems. What's more we can change the game on a machine in 20 seconds, and distribute the software on disks very easily. There's also a huge overseas market.'

ACE will be playing the new system in the

next few weeks. In the meantime, there's no doubt that instant conversion to arcade format could have a huge impact on the software business. 'We'll certainly do it again if it works out,' said US Gold's Richard Tidball. ■

The new Intec Video System - home software brought into the arcades.



ACE
NEWS

AMSTRAD - WHERE NOW?

'It has been going to get into the market, he's going to have to be quick,' declares Tim Chaney of US Gold. 'It has NOT doing something, he's mad.' Bernard Dugdale, EMI, 'It he DOES produce an Amiga clone, we'd be very interested, the from the Commodore source' - and we'd take legal action.

Just a few of the random remarks overheard by the ACE team over the last few weeks on the subject of Alan Sugar's much rumoured new 16-bit machine. Just what IS the state of the rumour these days? Is there REALLY anything cooking in Romford? Or has Amstrad, heaven forbid, turned its back on the entertainment market?

The latter view is supported by two main arguments. The first is that

Amstrad's profits are currently based largely on the sale of their small business computers, the second is the alleged difficulty of getting hold of new CPC machines. 'I've heard he's stopped manufacturing CPC's altogether,' remarked Rainbow's Pete Moreland, 'nowadays whenever we try to get a machine we have to settle for second-hand'.

Mr Sugar has no doubt on that last point. It's not true, he told ACE. 'We're making more CPC's than ever before.' But what about future commitment to the entertainment industry? Nick Hewer, speaking for Amstrad points out that. At the moment, the bulk of our turnover is in the computer business, and there is a vibrant social market for the games

machines.

First point of uncertainty. Mr Hewer says games machines and not games computers.

'We have no intention,' he continued of lessening our grip on the games market and have every intention of keeping our leadership of it.'

Second point. It doesn't take an IQ of over 10 to see that simply turning out CPC machines is not going to keep Amstrad on the cutting edge of the computer market. So what will they come up with? 'They haven't got a track record for producing anything new,' points out Andrew Hewson, 'so the only thing I can think of is an ST or Amiga clone.' Which is just what a lot of other people have said.

Commodore would undoubtedly

take Amstrad to court if the company attempted to produce an Amiga computer clone, but what about a licensed Amiga based console which wouldn't conflict so heavily with Commodore's market?

'That would be a different proposition,' said our Commodore source. 'It's certainly an interesting idea.'

It certainly is. Amstrad sell the hardware. Commodore scoop the royalties and the software houses sell more games. Whatever the answer, there's something in the air. Mean while, rumour has it that Amstrad have decided to call the new machine a Sinclair.

'I can't comment on that. We never talk about new products' counsels Mr Hewer. ■



ELITE GO BUDGET

Be prepared for classic Elite titles including *Commando*, *Alienware*, and *Frank Bruno's Boxing* to tumble into your lap for a bargain £1.99 in the next few months. The company are moving into the budget arena, either with a new label or through a third party and will be producing many of their old hits at the new low prices.

'We're still examining all the options available to us,' said company budget spokesman Peter Kury, 'but if we do it all in house we'll definitely

be launching a new label. All will be revealed by May or June.'

At the same time, the company are pushing hard into the growing 16-bit market and they're particularly proud of *ST Buggy Bay* and *Space Harrier*. With any luck the budget move will enable the company to scoop some revenue that can be ploughed into development of more expensive 16-bit releases. ●

Commando - yours soon for £1.99

TELECOMSOFT GRAB US BLOCK-BUSTERS

Icom Simulations, who produced up market, hi-tech icon driven games such as *The Uninvited* and *Dalai Vu* for Mindscape in the States, have set up a programming team in the UK and signed up with Telecomsoft.

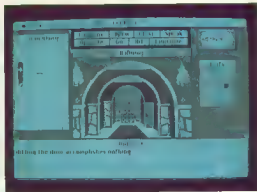
Six titles are in the pipeline, including *Days Vu 2* and a 'superbly animated shoot-em-up game set in the Wild West'.

Surprisingly Icom do not plan to concentrate on icon-driven adventures in future, but mean to move into the arcade game arena. 'We'll be producing fast-action graphical arcade games for the ST, Mac, and Amiga. Commodore 64 versions will also appear though we aren't sure at this stage whether we'll do them ourselves or contract them out,' said Jake Glover, Icom UK's managing director.

Apparently Icom are planning to move all their games programming work to the UK, perhaps because costs here are lower. Meanwhile the American division is to move out of the entertainment area and begin programming business software. Looks like the Americans are waking up to the fact that

Europe, and the UK in particular, is where the action is nowadays. ●

Chickenspell - a delicious icon game on the Mac. Now there's more to come via Telecomsoft...and for more details, too.



CRAM YOUR FINGER ON THE DIAL

If you've got a modem and the software to go with it, Telenet and Compuserve have both got news for you. Telenet are the company who brought you Micronet Press's online magazine for computer buffs, but their latest service aims to entertain all computer users.

Called Hotel California, the service is open to anyone over 18 who's got the equipment to log on. There's no subscription to pay; you're charged for the time you spend online at between 25p and 38p a minute, with the cost added directly to your phone bill. For the money you can access games, classified ads and a mail order service run by catalogue moguls Kays.

The real hook of the service, however, should be the open and private chatline services offered

You can meet strangers for an online chinwag or confer with friends. What's more the system links up with Micronet's Teletalk service so you can swap computer-minded banter with any of its 20,000 or so members.

The service is fully operational now - just set your modem equipment to 1200/75 baudrate and dial 0898 10 0890 - but is being run on a trial basis for the next three months. One of the things Telenet hope to find out is whether people are prepared to pay 25p a minute for an online service. 'It's not an unreasonable price,' claimed PR man Dave Rosenbaum. 'You'd have to pay the same to use any 0898 service so we don't think it'll be a problem.' In practice the pricing is pretty much forced on Telenet by

BT's changing structure and could prove to be the service's Achilles' heel.

All Compuserve's services are still very much subscription only but they've just expanded to take in the world wide micro news column Newsbytes. This weekly service has been making quite a name for itself on networks in the States where it was voted 'Best Online Publication' last year. The UK news on Newsbytes comes from Steve Gold - best known for his part in the hacking of Prince Phillip's Telecom Gold mailbox - but there's also info on the movie scene in Europe, Japan, Canada and the USA itself. At a hefty 10,000 words or so per week there's plenty of reading matter there for the news hungry ST Amiga or C64 owner. ●

TOGETHER WE STAND....

A national TV ad campaign to improve the 'spotty kid' image of computer entertainment was high on the agenda as the cream of the industry poured into a luxury Jersey hotel recently and backed the call for a new software publishers' asso ciation.

Since the demise of GOSH (Guild of Software Houses) there has been no effective representative body for the companies who produce our games. That's bad news for all of us because the only way we're going to see computer games really take off is if the market can be expanded to support

expensive new projects. Everyone realises that 16-bit games can cost a packet to develop, so unless there are more people to pay for them we can lose truly advanced computer entertainment goodbyes.

The good news, then, is that those present - which included major players such as Elite, Hewson, and Electronic Arts - voted strongly in favor of a pilot study and the establishment of an organisation that could give us a bit more street cred. Let's keep our fingers crossed that whoever's piloting the study knows how to fly. ●

VERMINATOR - BLACK LAMP EXTERMINATOR?



Nigel Brownjohn

One of the problems with 16 bit software is spending lots of money on developing games with meagre zany graphics, and ending up with sub-8-bit gameplay. Games like *Dungeon Master* offer hope for the future, but we're still getting offerings like Firebird's *Black Lamp*, which looks stunning but lags down seriously on the playability stakes.

Nigel Brownjohn, designer of Rambert's *Verminator* (programmed by Chris Hinsley), has strong views

on this. At first sight, *Verminator* looks disturbingly like another *Black Lamp* - fantastic graphics, but apparently very little to do except run, jump, and zap. There's so much more to it than that, counters the confident designer, 'this game is going to be a *Black Lamp* killer. Basically you have to set up a successful business as a 'verminator'. That means either going around destroying pests and working your way up the ladder, or you can try other methods.

What other methods? Well you could go to the banks and borrow lots of money, or you could go to The Mob and borrow even more money. You could even go gambling. Trouble with having lots of debts, however, is that the various institutions will get sloppy if you don't pay up, and start sending killer droids after you.

Verminator is due out in May - watch out for the definitive ACE review. ●



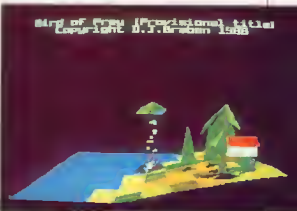
Verminator - pretty and playable?

TILT, BURN, AND FIRE...

New-look Telecomsoft budget label Silverbird err on the verge of releasing *ST Thrust*, and about time too. The game's been ready for ages and it's good stuff - fast, sonar-like and very tricky with four new planets compared to the 8-bit versions - so it could have been a nice little earner over Xmas. But even with a very reasonable £9.95 price tag it may not do so well now with the spectacular Odds to lure till burn-fire fans away.

Not to worry. Telecomsoft have a secret weapon in the form of

Zarch. Rambert's *ST* and Amiga versions of this classy little burn 3D shoot-em-up won't be out until the summer, and probably won't even be called Zarch - current working title is *Bird of Prey* - out as mentioned in our 'Saison Spies' feature (page 31). The *ST* version is already looking very good indeed. Fans of interesting and unusual control methods (not to mention amazing graphics) should start forming an orderly queue now - and let's hope this one doesn't get held up for six months or so! ●



ST Zarch, aka Bird of Prey Verminator, you saw it here first!

IN BRIEF...

ST BUY BO

No Jungsberg, the programmer who thrilled Spectrum owners with the isometric adventure *Fairlight* three years back, is now working on his first 16-bit title for Telecomsoft. A new Spectrum title *Resolution* is also under development and due for release.

AUF WIEDESEHEN, ARIOLASOFT

After three years this side of the North Sea, German games house Anolasoft have pulled out of the UK software market. According to Anolasoft UK head man Willi Kammincke the firm had 'failed to make enough of an impression on the market' - this despite some great games like *Deer Hunters*, *Red LED* and *They Stole a Million*.

If you were looking out for those Magic Bytes titles that Anolasoft were planning to publish over here, don't despair: Gremlin now have UK rights to the games, with the first of them - *Vampire's Empire* - reviewed this issue. Stay tuned for *Paranoia*, *The Pink Panther* and others in the very near future.

SYDNEY CLAIMS

Since their management buy-out, former CRL budget label Power House have signed a publishing deal with confusingly named Vancouver based games programmers Sydney Development Corporation. Under the deal, Power House get to sell off Sydney titles like Spectrum *Dambusters* and C64 *BC's Quest* for Tyres. Strangely their press release on the subject described the games as 'recently successful' - how many years ago is 'recently' guys? - and came with a photo of Sydney Opera House. Either they don't know where Vancouver is, or they're trying to be funny.

US GOLD GO ACE

For advanced computer entertainment, that is. Full-price software houses need to spend longer developing games so that the resulting products are better. Don't just take our word for it: listen to the software houses themselves. All the Platinum launches a couple of months ago. Ocean boss David Ward explained how his firm would be concentrating their efforts on fewer titles in order to raise the quality.

For one of the country's largest software houses to make that kind of decision is good news, but Ocean aren't alone: now games giants US Gold have followed suit. As product marketing manager Richard Tidsall explained, "This year US Gold will have 20 mainline titles excluding compilations, compared with around 30 last year, though there will also be six Capcom conversions and 10 Rainbow Arts titles marketed and sold in their own right." This drop in output will allow an emphasis on "fine tuning the games, he added, coupled with extensive playtesting and the best news of all for many ACE readers: a "massive investment" in products for 16-bit machines.



Telecomsoft's Thruport expert Colin Fudge gets in a spin at the top of the Tower and loses a life.

TOWERING TELECOMSOFT

ST Thrust, now sadly overshadowed by Microsoft's excellent *Orbs*, was one of a host of new games recently on show at the top of the Telecom Tower. Other goodies included *Starglider II* on the Amiga versions due out in June or July, *Vermintor* (same story else where), and *Legend of the Sword* - a graphical adventure featuring a combination of menu-driven commands and text entry. Star of the show, however, was undoubtedly an almost finished version of *Cerberus Command*, showing a superb solid 3D display shifting positions at an alarming frame rate.

In the faded restaurant (no longer open to the public, alas) high above old London town, Telecomsoft also brandished new logos

IN BRIEF...

for the three 'Bed labels and coughed up a lavish lunch for those present. After several glasses of vino the assembled backs began to wash the landscape around them would stay in one place - funny that, since the Tower only started to revolve AFTER the welcoming drinks.



UP, UP AND AWAY

ACE co-editor Pete Cosner looks more confident in the above pic than he feels - not surprising since journalists invited to share the pleasures of the high life with Major 'Wild Bill' Sleskey of Microprose came in for a little more than they bargained for. Pete took to the skies with the American ace - who claims to be an adviser to the Pentagon - and soon found himself in a headlong dive towards terra

irma, ending with a sharp put-up and a 3G dose of centrifugal force. Below you can see what he looked like afterwards - doing a good job of haking back his breakfast.



CASCADE RAF LICENCE

If you thought US Gold's people licensing (Charlie Chaplin, Marilyn Monroe etc) was wacky: how about the deal Cascade have just pulled off? They've got the licence for an official Royal Air Force game. It's good news for injured RAF personnel and their dependents - the licence fees paid go to the RAF Benevolent Fund - and Cascade are pretty chuffed too. In the US market where Cascade flight sims *Ace* and *Ace 2* did so well, the RAF are apparently regarded as an elite force - and that makes them a very marketable commodity indeed.

ACE ON THE ROAD...

First in a new series of roving mini-reports. This month we trip down to St Austell for a visit to MICRODEAL.

Microdeal are one of those software houses who don't set up a big hue and cry about everything yet they've been around in the 16-bit market as long as anyone and have consistently turned out some of the most popular games for Amiga and ST.

Amazing to think that for years they were

world-beaters with software for the Dragon. A trip to the picturesque seaside town of St Austell in the Duchy of Cornwall revealed Microdeal's history and what they've got up their sleeve for the rest of '88.

Eagerly awaited by 16-bit school-up fans will be *Goldrunner 2*. Those who are fed up with the straightforward scroller will be relieved to hear that it's not just the same old thing as its predecessor, elements of *Defender* creep in as you try to collect objects on your travels. It's exceptionally fast and smooth-scorring, and looks as though it will be very playable when released in a couple of months' time. You will also be able to buy a couple of scenery disks to prong your interest - they should cost around £10.

Leathernicks is Microdeal's long-awaited combat game, reminiscent of *Ran Warriors* in its manic killing action. The main attraction here is the 4-way joystick adaptor



St Success

that Microdeal will be marketing for use with the game; it plugs in the ST's parallel port and will probably cost around £5.00. While the idea is to cooperate, you can actually shoot your buddies in the back and hear them scream.

While all the above programs are for the ST, Amiga owners should not despair; they'll all be converted. And

this summer should see an Amiga version of *Airball*, the 3D arcade adventure that was such a big hit on the ST. In fact John Symes says that Microdeal could well be moving away from the ST and toward the Amiga as a development machine over the coming months. It's a long way from the ZX30 that first programs were written for.



John Symes - looking towards the Amiga.

SUPER ACTION FOR YOUR AMIGA



ONLY
£24.95
EACH



ocean



ONLY
£24.95
EACH

STRIP POKER 2 (PLUS)

Anco

Amiga £14.95dk
 Atari ST £14.95dk

If it's female pixel flesh you want, then Anco hope to have just the thing for you. There's a smidgeon of male pixel flesh too in the form of a small on-screen character that represents the player - lose a hand against someone like the delectable Sam - and your on-screen representation sheds some clothes.



Amiga - Strip poker

NERCULES

Greenin

Spec £7.99cs £12.99dk
 Amstrad £9.99cs £14.99dk
 MSX £7.99cs

Ancient Greece is the setting for this arcade adventure that gives the player the chance to battle it out with skeletons and minotaurs in an attempt to complete 12 temple tasks. Backdrops for the action include Greek temples and Hades - look out for it in the near future.



MSX - Nercules

STAR RAY

Logotron

Amiga £19.95dk
 Atari ST £19.95dk

This test 'n' colourful shoot 'em up looks ever so slightly like that all time classic Defender - and why not? If this is the sort of blast you're after, look out for it sometime in May.

MIGHT AND MAGIC

Activision

CG4 128 £24.95dk
 IBM PC £29.95dk

For Fantasy role-playing fanatics, Might and Magic looks mighty interesting. You've got 94 spells to cast, 250+ items to collect and use and over 200 monsters to deal with. If that's not enough you'll have castles to cross, mountains to climb and castles to search.

Snippets...

Up and coming titles for your micro.

CYSEKKNIGHTS

Spec £7.95cs £14.95dk
 Consider the name. R.T. Smith - does it mean anything special to you? If you answered yes then chances are you're a Spectrum or Amstrad wargamer who has enjoyed some of this man's earlier works - Vulcan, Ambien, Desert Rats. It might come as something of a surprise to you then to learn that he's turned his attention to arcade style games - at least for his next release. Cyseknights is a one or two player combat/platform game which comes as two separate programs. The first program allows



your character to battle against other gladiators, while the second lets you re-design your own robots before sending them into battle against either another player's robots or computer controlled bad dies. Cyseknights should be available now.

Birds of a Feather

STARGLIDER II

P. L. L.

Amiga £24.95dk
 Atari ST £24.95dk

Having chased the Egon forces away from Novena with a fee in their ear, Jaysan and Katra have volunteered (loosely) to infiltrate the Egon-dominated planet of Mira and annihilate the Egon forces once and for all - not to mention destroy their beam projector which is trained on Novena. Even getting to Mira is going to prove extremely difficult, but you should be able to attempt the highly unlikely 'real

soon now'. Starglider II is going to be the first game released to incorporate the Argonaut Disc Loading System - the same disc will run on both ST and Amiga machines.

RETURN TO GENESIS

P. L. L.

Atari ST 19.95dk
 Amiga 19.95dk

This is the latest game from the author of Goldrunner and Karate Kid II - Steve Bak. You're flying a craft over fantastic landscapes that are swarming with aliens. There are obstacles to hinder your progress

STAR GOOSE

Logotron

Amiga £19.95dk
 Atari ST £19.95dk
 IBM PC price undecided

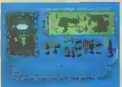
The Steve Cain and Kenny Everett duo (Star Trek, Black Lamp) team up again for this curiously titled space shoot-'em up. Climb in your 'goose' and fly through the tunnels and across the plains of Nom, blasting away. There's not much here to stretch the old grey matter, but it is good, clean homocidal fun, watch out for it soon.

THE FLINTSTONES

Wildcat Siam Entertainment

Amiga £19.95dk
 Atari ST £19.95dk
 Spec £8.95cs
 CG4 128 £9.95cs £14.95dk
 Amstrad £8.95cs £12.95dk
 MSX £8.95cs

Barney, Fred, Wilma, Pebbles - they're all here in this gaming adventure of classic proportions. Fred's up to his neck in all sorts of trouble and it's up to you to sort it all out. The 16 bit versions should be available first with the 8-bit versions coming close behind.



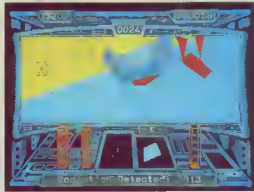
ST - Legend of the sword

LEGEND OF THE SWORD

Rainbird

Atari ST 24.95dk

This new style of adventure game tells of the chronicles of Anar and of a magical sword and shield whose aura protected the inhabitants of Anar for many centuries. It's only because of an invasion by mutant humanoids under the command of the evil wizard Suzar, that King Darlus has summoned you and five others to find the enchanted sword and shield. The game boasts over 300 individual cameo illustrations - which change according to the situation - loads of intelligent characters to interact with and a highly flexible interpreter. Legend of the Sword should find it's way into your local stockist very soon.



Amiga - Starglider II

ated
Evernet
apt team
ly titled
in your
tunnels
hast
here to
but it is
watch

idi
ide
lek
vick

ables -
gliming
erlators
sorts of
ort of all
out) be
ensions

ion

RD

game
and of
these
its of
only
autant
nd of
Der-
ive
word
over
ins -
stu-
arica-
ignity
the
your



T E S T D R I V E

Test Drive is different - a new standard of driving simulation game. You're probably thinking "that's what they all say". So don't listen to us. Read what Commodore User and Popular Computing Weekly said -

"never have I encountered a game where the introductory screens make me want to play the game as much as this one". C.U. "...the graphics are out of this world. For any car enthusiast the game is essential. P.C.W.



ACCOLADE

R I N G : 0 7 5 3 4 6 4 6 5





HOW CAN SO MUCH FUN BE CONTAINED IN ONE BOX?

A colossal
compilation of original
gameplays and unique
challenges brought together in
one classic collection of action,
intrigue, humour



and entertainment.
More fun... more excitement
than even the most dedicated
gameplayer can handle at
any one time.

SPRINTING ANIMALS

FOR ONLY £9.99 (£14.99 DISK) YOU CAN FIND OUT

CBM 64/128

THE DOCT

Save your way through a
network of tunnels to your
toughy evading the myriad of
hazards that roam to meet you,
beware the Aliens and Insects
that roam around the
circumference of THE DOCT.



THE FINAL MATRIX

Brown Planted, wait on a
dangerous and mysterious
surface mission to rescue
after Captain Impersonated on
the sinister Matrix prime
network.



AGE WIDENBERG RIVITY

Lying low in Gibraltar, your
persecuted Party Male's
whimsical have been
looked to 'Yankee', who are
in hot pursuit.



THING BOUNCES BACK

A quick hand and dodged
demonstrations are needed if
you're to get anywhere with
Thing, as Grenade's spotlight
star bounces back in a new
adventure.



MASK

Join with the forces of MASK,
skillfully surrounded by Matt
Trakker and combat the
vicious VENOM in their
quest for domination of the
world.



BASIL THE GREAT MOUSE DETECTIVE

Will your powers of deduction
be enough to enable Basil to
rescue Dr DeWagon from the
villainous clutches of
Professor Rattigan?



DEATH WISH 3

Modern day vigilante Paul
Kearny reveals his own form of
revenge as this arena and fifth
shot involves the streets of
New York.



CONVOY RAIDEN

The true world is in peril, the
future of the country lies in
your hands. High-tech
powerful weapons are at your
disposal and important
decisions must be made.



JACK THE RIPPER IN COCONUT CAPERS

Established in Australia, our
favourite little horror jumps
about to head in deepest,
darkest jungleland. What
horror is given us to create is
limited only by your
imagination.



SAMURAI TRILOGY

In an age in which honour was
reversed, a clan of warriors and
themselves apart to dedicate
their lives to a perfection in
combat and discipline of mind
that became a religion.



BULLDOG

Blind your way through
levels of high speed space
action, penetrating your
enemies outer defences
to reach and destroy the
POLYN membership.



RE-BODIED

Armed to the teeth, challenge
the might of the unshifting
overlord, to return to a happy
go-lucky life as a
B.B. Remender.



ATARI SC1224

WIN AN ATARI ST!

**Has your ACE card come up trumps this month?
There are 25 great prizes.**

For everyone who received a free ACE card on the cover of last month's magazine, here's another great opportunity to win prizes.

Using the same program as last time, just type in the 25 new 4-letter codes printed on this page. If the program converts one of them into your personal number, you're a winner!

If you missed last month's ACE card, you can still get hold of an ACE card—see the box for details.

LOOK AT THESE PRIZES!

ONE 1st PRIZE: ATARI 520ST + COLOUR MONITOR

The winning code: **C1ZW**

FOUR 2nd PRIZES: £50 of software—chosen from the ACE Special Offer pages

The winning codes: **BSVP • BUDS • CEFM • DFJZ**

TEN 3rd PRIZES: £25 of software—chosen from the ACE Special Offer pages

The winning codes: **ACFI • BOQB • EMIL • ARGH • ATIB • AYNC
• EDTV • APAD • BUPO • COJS**

TEN 4th PRIZES: A year's free subscription to ACE magazine

The winning codes: **BIWT • DVLW • AFGD • BWOW • CUCG • AIOL
• ARER • CRZL • ATNO • EFXD**

HOW TO CLAIM A PRIZE

If you are one of the winners, you may claim your prize simply by posting us your ACE card together with a note stating which prize you are claiming (and from which issue of ACE).

If you find it is too tedious, feel free to ask the retailer you bought it from the winner prize in the ACE Reader Offer pages (M. 86).

However, your claim is valid, up until forward your prize and return your card within 28 days (strictly cash claim).

Post to: ACE CARD PRIZE CLAIM, 4 Queen Street, Bath BA1 1BJ

Closing date for claims MAY 12th, 1988

HOW TO OBTAIN AN ACE CARD

If you missed the April issue of ACE, you may obtain an ACE card free of charge by sending a self-addressed manila envelope (postage paid) to: ACE CARD REQUEST, 4 Queen St, Bath BA1 1BJ. (This offer valid while stocks last).

THE DECODER PROGRAM

The short program below will DECODE the 4-letter codes printed below next to the prize. It turns each code into a 4-digit number such as the one printed on your ACE card. If you have in the 4-digit code the program using the instructions for your computer (please note).

Then RUN the program. It will ask you to input each of the prize codes in turn and will then reveal on screen the winning number. If your number comes up, YOU CAN IMMEDIATELY CLAIM YOUR PRIZE!

If you are unable to get the program to work, a list of the winning numbers, correctly decoded, may be obtained by sending a stamped self-addressed envelope to ACE Magazine Ltd, 4 Queen Street, Bath BA1 1BJ.

C64, CPC, ST, AMIGA version

```
10 FOR A=1 TO 25 INPUT "Code",B$
20 B=D-4 FOR C=1 TO 4:B=D-B*25
30 D=ASC(MID$(B$,C,1))
40 IF D>90 THEN D=D-32
50 B=B+D:65 NEXT C:PRINT "Winning
Number is",B NEXT A
```

SPECTRUM version

```
10 FOR A=1 TO 25 INPUT "Code",B$
20 LET B=4 FOR C=1 TO 4 LET B=B-26
30 LET D=CODE(B$(C,1))
40 IF D>90 THEN LET D=D-32
50 LET B=B+D:65 NEXT C:PRINT "Winning
Number is",B NEXT A
```

TYPING IN THE PROGRAM

SPECTRUM

48K: Press on, and type the Spectrum listing in as shown, pressing ENTER at the end of each line. To get the word CODE in line 33, hold down caps shift and symbol shift until together and press the letter key. When you've typed all five lines in correctly, press F1 (or F10) following ENTER. Now type in the codes one at a time, pressing ENTER after each one. The program will stop after you've typed in all 25 codes.

16K: Speed 120K BASIC: Press on the space key many times and type in the Spectrum listing as shown, hitting ENTER at the end of each line. Then RUN, or the ENTER key again, and type the codes in as for the 48K Spectrum above.

CEA28

Type the listing in as shown, hitting the RETURN key at the end of each line. Type RUN (or) and then the RETURN key, not RETURN again, then type the codes in one after the other.

AMSTRAD CPC

Type the listing in as shown, hitting the RETURN key (120) or the longer of the two ENTER keys (160 or 164) at the end of each line. Type RUN and hit RETURN or the longer ENTER key again. Then hit CONTROL, and the small ENTER key here, and type the codes in one after the other.

ATARI ST

Put the LANGUAGE disk in the drive and switch the ST on. Double-click first on the drive A icon, and then on the BASIC PROG icon in the Basic. Type EDIT and press the RETURN key. Now type the listing in, hitting RETURN after each line, and press the F10 key until you reach the end of line 10. Now type RUN, press RETURN again, and type the codes in one at a time.

AMIGA

Switch on and your Workbench will appear. Double-click on the desktop to open the drive A icon, and then on the BASIC PROG icon in the Basic. Type EDIT and press the RETURN key. Now type the listing in, hitting RETURN after each line, and press the F10 key until you reach the end of line 10. Now type RUN, press RETURN again, and type the codes in one at a time.

OTHER MACHINES

The C64, CPC, and using a standard Microsoft Basic, can be typed in on most systems. If you can't get it to work on yours, write us for a hard version—details of this are listed below.

RULES

1. The promoter is happy to receive any correspondence to: ACE Magazine, 4 Queen Street, Bath BA1 1BJ, and anyone involved in the distribution or sale of Advanced Computer Entertainment magazine.

2. Drawing of the ACE card is limited to one per household.

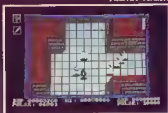
3. Each new letter code printed in the magazine corresponds to a winning 5-digit number out of one of the ACE cards.

4. The codes may be correctly decoded using the program printed each month in this magazine.

5. Claims for prizes must be received by first one on the closing date at the latest. The value of any unclaimed prizes will be carried forward to future issues.

6. Due to a production error, some of our earlier cards gave a single prize, the publisher reserves the right to divide the prize between the winners.

7. In the event of any dispute, the decision of the publishers is final.



Spartan

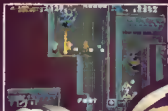
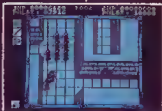
Unchain yo' l

Your friends are prisoners within the mysterious castle. Release them! They told them and chain them to yourself; only then can you make your escape. Release as many as you can for their predicament is to die, though the more you have on your chain the slower your progress will be! Defeat yourself with a choice of 6 different weapons! Battle your way through 112 stages of gripping continuous action! To beat your best, rescue your friends, escape, then you can only wish to be where you are.

Version

Spectrum 48k Version

Arcade Version



for Imagination

Release 10
then cap
then
show the
side of
the
your
core

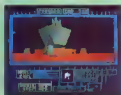


Copyright DATA EAST U.S.A. INC. 1988
All rights reserved
Manufactured under license
DATA EAST U.S.A. INC.

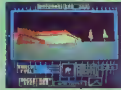
Shattered is available for:
Amstrad CPC • Atari ST •
CBM 64/128 •
Spectrum 48K/128K+2 •
Spectrum+3 • MSX

UNDER STARTER'S ORDERS

The tension's mounting as these thoroughbreds prepare to get under way. Will the favourites turn out to be non-starters? If you're smart you'll check out their form and starting prices in a future issue of ACE – you wouldn't want to lose your shirt on a bob-tailed nag, now would you?



064 - In the Assault sector (second level)?



064 - Your jet suit comes complete with Quad drive and protective plasma shield – and designer logo of course.



SPECTRAL M – The Spacey's Assault sector

DARK SIDE

Incentive

To produce a follow up to such an innovative and entrancing game as Driller – ACE Rated 962 (PC Version) would be regarded by many as a tall order. Incentive reckon they've got the answer though with Dark Side. The game incorporates the 3-D landscaping technique – Presscop developed for Driller and is set on Evtah's other moon, Tricupad. Your objective is to destroy the giant weapon, Zephyr. One which the Kelars are planning to destroy Evtah with. Watch out for the definitive ACE review in the near future.

INTERCEPTOR

Electronic arts

This action-packed flight sim for the Amiga gives the player six missions to complete in and around the San Francisco Bay area. You've got two planes to choose between for the missions

– an F16 Hornet and an F16 Falcon, both featuring digitised engine and weapon sounds. We're hoping to review this one next month – so don't miss out!



Your F16 is out on the aircraft carrier's runway



We have ignition! Prepare to take off



Tearing out over the sea. This is a rear view of your plane and the aircraft carrier.

QUADRALIEN

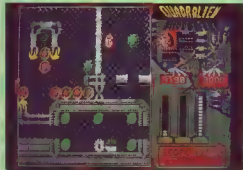
Logotron

This exploration/puzzle game for the ST is set in the 21st century and the player is in charge of six remote controlled robots. The idea is to destroy the alien who's to be found at the core of a large radioactive installation. You have to enter the installation on the lowest level and clear the level of all radioactive contamination before you can access the elevator and pro-



If this is the right code you can make a start on level two.

ceed to the next level. Clear enough levels and you'll arrive at the core.



On level one - you're controlling the robot called SPUD at the controls.

INTERNATIONAL SOCCER

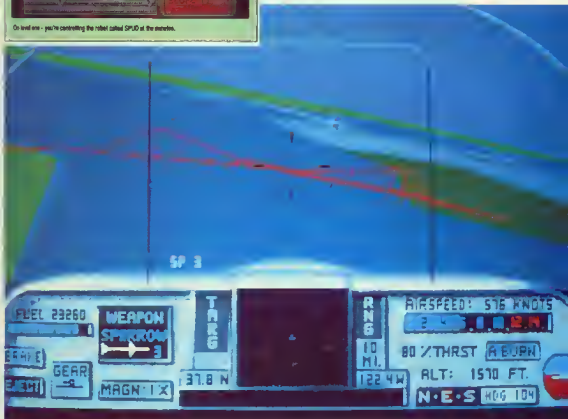
Microdeal

There are a couple of wonderful football games already available for the 8-bit machines, but they're no good to you if you own an ST or Amiga. Microdeal to the rescue! This 16-bit soccer game gives the player the

chance to play under floodlights, or even in the wind and rain. Reviews will be lacking off in next month's ACE - so grab yourself a season ticket and make sure you never miss a match.



Ready for kick off - let's hope the fans don't invade the pitch at the end of 90 minutes.



The Golden Gate Bridge. You wouldn't blow it up with a Starline - would you?

NOW PLAYING AT A STORE NEAR YOU.



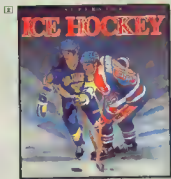
1 SPY VS SPY TRILOGY

When the reviewers say:

Spy Vs Spy Vol 1 – voted the best two player game ever designed
Vol 2 The Island Capes – winner of several awards including game of the year
Vol 3 Arctic Antics – A must for fans of the original Spy Vs Spy games.
Spectrum 48K/Amstrad CPC/Commodore 64/128 cassette £9.95
Amstrad CPC/Commodore 64/128 disk £14.95

2 SUPERSTAR ICE HOCKEY

Voted the best sports simulation of 1987 – Happy Computer
Commodore 64/128 Cass £9.95 disk £14.95
Amiga £24.95 Atari ST £24.95
IBM-PC + Compatibles £24.95
IBM-PC 3 1/2 inch £24.95

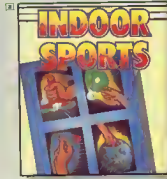


COMING SOON GRAND SLAM

A fully animated realtime tennis simulation
Play the US Open, Wimbledon etc.
£24.95 Amiga only

Data\byte

15, Wolsey Mews,
Kentish Town,
London, N.W.5, 2DX
Telephone 01-482 1755
FAX 01-267 1828



3 INDOOR SPORTS

Highly acclaimed sports simulation – receive rave reviews. A must for sports fans. All Hockey, Darts, Bowling and Ping Pong.
Note: C64 version does not include ping pong.
Spectrum/Amstrad CPC/Commodore 64/128 Atari XL/XE Cass £9.95
Amstrad CPC/Commodore 64/128 Atari XL/XE disk £14.95
Amiga £24.95 Atari ST £24.95
IBM-PC + Compatibles £24.95
IBM-PC 3 1/2 inch £24.95

4 TASK III

'It really has to be played to be believed, I'm hooked' – Commodore User
Commodore 64/128 Cass £9.95 disk £14.95

5 ST WARS

'If you liked Starblaster, you'll love this game: it plays better and it's much more fun to play, overall it's a much better game'
Atari ST £24.95

Computer animation can take any one of a number of forms most of which rely on techniques quite similar to conventional animation. Colour switching sprites and blitter objects (boos) are all basically processes giving the impression of movement in the picture plane (ie across the face of the monitor). They're widely used in almost all current entertainment software. A number of existing programs allow easy manipulation of sequences. *Film Director* and *Aegis Animator* for the ST and *Deluxe Video* and *Aegis Animator* for the Amiga are perhaps the best known. These are really just more powerful versions of bit-mapped 2D art and animation programs already available for 8-bit machines.

The more advanced software now appearing uses a very different set of techniques to give an impression of movement much closer to reality. The technique used is called *Solid Modelling*. This means that you can construct a computer simulation of any solid shape, decide on colours, surface textures and patterns, position your viewpoint and light sources, then render all of it on the computer screen. Once a scene is rendered it is a simple matter to move objects, view



These hearts bounce from right to left across the screen with smooth precision. Ash: aren't they cute?

Computer graphics on the home micro have become much more sophisticated over the past few years – but still basically static and in 2D.

Now, however, there's a new breed of animating software available for the 16-bit machines, and a new world has opened up for the graphics enthusiast. Brian Larkman looks at some of the latest techniques and packages.

GETTING ANIMATED

points or lighting and render again, eventually producing a series of frames that can be used to produce the effect of animation.

These techniques can be broken down into three main processes, object editing, motion editing and rendering. All of the software under review uses some combination of these to produce their end result, though some of the packages are much more elegant and simple about it than others.

OBJECT EDITING

The heart of any process aiming to simulate the real and solid world should be the object editor where the building blocks are constructed, named and welded together.

The computer's view of the world is a series of points (vertices) whose lines (edges) meet to define enclosed flat surfaces (faces). Joined together in various ways, these basic

elements can form primitive solids of varying complexity from three-sided pyramids to cubes to multiple-sided pseudo-spheres. These 'primitive' solids are the computer's building blocks. A range of them – including rings, wedges and cones – is normally available to the object editor and usually constructed directly by the software from stored algorithms defining them when requested.

Normally, the working view the computer provides of the scene is constructed of lines – a wire-frame view. The solid model, with all hidden lines removed, takes some time to compute so for normal working the wire-frame is sufficient. However, even the wire-frame must be visualised in some way that makes editing and composition of the object easy and straightforward.

The conventional approach – used by designers and architects – is to provide four

viewpoints or elevations: a front elevation, an end elevation, a plan – facing say north, east and down respectively – and an orthographic (*Knight's*) view that can be varied to suit the circumstances to show the overall effect of the other three. Usually, the fourth view is for observation only. This approach is taken by both *Cyber Studio* and *SculptAnimate* (though *Cyber* can provide all four at once). The great advantage is that any point can be defined accurately using at least two of the views – though the profusion of images can be confusing initially.

An alternative is to provide a single, variable viewpoint of the whole scene – either a conventional elevation or an orthographic view. Less confusing, but not so easy to manipulate individual points with. A single viewpoint is therefore better suited to a method that only enters ready-made objects

and rarely deals with individual points. This is the case with *Forms in Flight*.

As well as the 'primitive shapes' an object editor needs to provide other tools to manipulate objects and create a variety of shapes - including SPIN, to produce 'wine-glass' shapes, EXTRUDE to drag 2D shapes such as letters into 3D and JOIN to glue simple shapes together. Once formed it's necessary to move objects about the screen, duplicate them, change their scale or rotate them. For this the editor should possess a series of functions both easy to access and simple to operate. Both the Amiga and ST can use 'gadgets' or icons on screen and 'drop down menus' hidden at the top. A combination of these two methods seems to be the best way to manipulate objects within the editor. In this respect only *Cyber Studio* (ST) and *SculptAnimate* (Amiga) can be used in an intuitive way.

SCENE/MOTION EDITOR

Once objects comprising a scene have been assembled their relative motion through the animation must be choreographed. This process is the make or break of computer animation, and if a computer is to make a task easier and quicker than the actual process of using the machine should be easy also.

Like conventional animation, computer animation produces a series of images or frames that vary from one to another in a sequential way. The simplest way to achieve this is to set up a scene, render it, change it slightly, then render the next scene until the animation is complete. This can be a very tedious process, and the producers of an animation want tools that make it more automatic and they want them to be easy to use.

Several methods can automate the procedure - using a global scene, key frame animation, motion paths, object/motion or tree hierarchies etc. Some of the software reviewed has some of these facilities. Only *SculptAnimate* has all of them in an easy-to-use form. Most of the other packages are either not very versatile for animation or are complicated and difficult to use.

A global scene is one, preferably composed in the object editor, that contains ALL the information required to produce a particular animation. It should include the starting position of all the objects, the observer, cameras and lights. For each moving object its path or at least its finishing point should be defined. If the camera or lights move the extent of that movement should also be determined. Ideally, all this information should be visible in the edit window using motion paths, not shown in the final render.

If an object transforms during an animation - a rubber ball compressing as it strikes a surface perhaps - this information cannot be contained in a global scene. Instead key-frame animation and inbetweening can be used. At 'key' places during the animation - when the ball is at maximum compression



Various stages of Coleman rotating through 90 degrees. Simple when you know how

for instance - a scene is composed and saved to disk. The first and last scenes might also be key frames. Once these have been defined the computer can automatically interpolate the frames between.

Thus frame 1 might be of the ball at the top of its bounce, frame 10 at the bottom when it is most compressed and frame 20 of the ball back at the top. The computer would compose each of the scenes for frames 2-9 with the ball gradually becoming more and more compressed. This is not actually what is required, so another 'key' frame is needed at perhaps frame 8 showing the ball uncompressed but just touching the surface that will compress it. Frames 7, 8 and 9 would then be the 'inbetween' stages before full compression for scene 10.

Motion hierarchies are family trees of the parts of an object. Each part is named separately so that a motion path can be attached to it. Thus a finger can bend independently but must follow a moving hand, which must in its turn remain joined to a moving arm.

RENDERING

Once the computer simulation of the scene has been constructed it can be rendered. This involves drawing all the objects in the first frame from the chosen viewpoint, illuminated correctly and using the maximum number of colours. All the packages tested except *Animator Apprentice* and the Ray-Tracing modes of *SculptAnimate* did this by examining each face of each object in relation to the light source(s), deciding which shade of its pre-determined colour it should be showing, then drawing that face. Each started the drawing at the faces furthest from the viewpoint so that the last faces drawn would obscure earlier ones - a quick and effective form of hidden line removal.

Animator Apprentice is unique in home computer animation in that it uses a 'surface-mapping' technique to project any specially prepared flat artwork (including HAM images) onto a contoured surface, meaning that a rounded object like a Coke Can can be shown in full colour 3D. *SculptAnimate*

Delta Compression

Animation uses up vast amounts of memory both within the CPU and on disk. To animate 1 second requires approximately 25 images, which would occupy all of one disk or almost 1Mb of memory. If the animation is recorded to film or video this is not a problem; if it is to be played back in real time (RAM animation) sufficient information must be stored in RAM for several seconds' worth of frames to be reconstructed quickly enough for smooth animation. All 3D animation packages use Delta Compression, which involves recording the first frame in full followed by just the parts of the image that change in the subsequent frames. This allows more frames to be stored in RAM and for them to be displayed very quickly.

uses another common technique from the computer graphics industry called ray-tracing. The colour of each pixel on-screen is calculated by tracing a 'ray' back into the simulation 'model'. If a solid surface is reached the colour, lighting and surface texture of that spot are used to calculate the value of the pixel. Adjusting flat faces are made to look curved with a 'smoothing algorithm'.

A new version of *Forms in Flight* due to appear soon should also use HAM, though in what form is not yet certain. *Quantum Paint* (from Edensoft) has shown that it is also possible to provide 4000 colours on the ST. The technical problems may prove insurmountable but it seems at least possible that the ST could also be made to provide full colour. True ST ray-tracing would then be possible.

FORMS IN FLIGHT

Micro Magic
£80 - available from the Amiga Centre, Scotland

Had this package appeared in this country a year ago it would have been hailed as a masterpiece. As it stands it sticks out little from the current crop of animation packages, partly because of the lack of promotion and partly due to the lack-lustre and boring manual.

which doesn't give the reader a clear idea of the range of facilities available. Nevertheless, it is capable of a number of excellent feats and is in some ways easier for the novice to comprehend. The use of one view at a time on a clear screen may frustrate the experienced but it is straightforward. The similar-looking pull-down menus offer the greatest limitation in use - some on-screen' gadgets or icons and a bit more colour in the menus would have made the interface much easier to use. Overall, the object editing tools are adequate.

Global animation is accomplished for each object by selecting it, then using menus to define the movement required during a particular block of frames. A hierarchy of names can be established to ensure that 'fingers follow hand follows arm...'. In other words groups of objects can be joined and

moved either together or separately. Even the Camera can be attached to this 'motion hierarchy' to produce pan and zoom. Key-frame animation and transformation of objects does not seem to be possible.

2, 4, 8, 16 or 32 colours can be used for rendering the final images though some problems are caused if the minimum 1Mb system is used. Depending on the complexity of the scene, rendering can take from a few minutes to several hours. Each frame is delta compressed so one disk can hold quite a large animation. The two major complaints about rendering are that frames cannot be saved as TIFF files for use in other programs and, conversely, pictures from other paint programs cannot be used as backgrounds.

ANIMATOR APPRENTICE

Hashique
£195 - available from the Amiga Centre, Scotland

By far the quickest of the current crop of packages. Its author, Martin Heath, describes it as an 'organic animator' because its especially good with organic objects such as humans, plants and animals rather than the usual smooth globes, glossy surfaces and geometric shapes. A flavour of the method used can only be gained by trying it out - difficult because the main program is expensive and the manual is rather disorganised and difficult to use. There is a simpler (and



It shouldn't take long to have the ACE logo spinning round the right way - with a little patience and know-how.

Colours on-screen

The Alan ST is normally capable of showing only 16 colours on-screen at once, so to allow for a range of shades across the surface each object can only have a limited number of colours, usually 2 or 3. The Amiga can show 32 colours at once in its normal hi-res mode and allowing for a range of 16 or 7 shades across a surface this still only gives a basic four colours for any object. Nevertheless, some remarkable results can be achieved with both the ST and Amiga in these modes and most animation software available is limited to this small palette.

Most Amiga users are now aware that in Hold and-Moody mode all 4000 colours can be placed on-screen. Rendering a surface using all these colours would allow smooth shading and full photographic colouration of a scene. *Animator Apprentice* and *SculptAnimate* both take advantage of this mode in very different ways to provide full colour images.

cheaper) version - *Animator Junior* (£52).

The technique used is surface mapping. The front, side, top and bottom views of each object are first drawn using a digitiser or drawing package (even HAM drawings). An object can be a limb, finger, flower, anything - though complex limbs are more mobile if broken down into parts. Each surface pattern - skin, toothless bark etc - is projected onto the smooth underlying surface. The resulting object can be choreographed with all the other parts in much the same way that other packages move objects using a hierarchy of names.

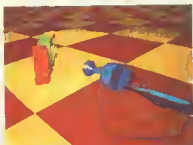
Like *Videoscope*, *Animator Apprentice* also uses individual module programs - a fresh program is started for each stage of the animation. Here the system seems to work reasonably well though it's still not a very elegant solution to the problem. Objects are



The legs start to spin

edited in the Sculpt section then the various parts are put together as 'stick figure' characters. The local and global movements each character can undertake are then set using Motion and Director: the action previewed using Rehearsal; then the full animation rendered with Record. The result can be viewed with the Display program. Backgrounds can only be included using a greyscale.

Overall, the system seems to work reasonably well, though to get good, consistent results will take practice. For slowing animation of complex, textural forms in 3D this is probably the only package of its type in the world. Developed to better use the Amiga's system of gadgets and windows, it would be superb. At present it is rather quirky.



Almost round now...

VIDEOSCOPE 3D

Aegis

£119 - available from Precision Software

Some of the first and best 3D animation demos for the Amiga were produced by Allen Hastings using software he had written now available as VideoScope 3D - currently amongst the best known packages for the very reasons that *Forms in Flight* is not, ie good presentation and packaging. While it is certainly true that VideoScope can produce excellent animations, it's not an easy or versatile package. User friendly it is not. Designed in a modular system supposedly easy to add more facilities to later, the system seems confusingly ragged and hilly, especially in the initial object editing phase. Objects are created in one of three programs that hark back to MS DOS or BBC packages of three years ago: simple lists of choices with little or no feedback. For any complex objects the only method available is by creating in the correct order (clockwise from

their visible side) an impossible task for the novice.

Motion and transformation of objects are both possible using key-frames and in-betweening but once again the motion files must be ASCII text files very laborious. Foreground and background pictures can be added providing they are drawn using VideoScope's standard 32-colour palette. Frames are saved in Delta compressed form.

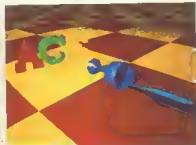
Overall VideoScope 3D is intended for the advanced user. In whose hands many fine animations have been produced. To get the best out of the package takes many hours of hard work and tedious list writing especially in the object editing department. The manual is reasonable but it has an uphill struggle against the complexity of the software.

CYBER STUDIO

Antic

£89.95 - available from Electric Distribution

So far, all the packages mentioned are for the Amiga. Better than any of them, certainly in ease of use, is Cyber Studio for the ST. Originally developed as a CAD package, the object editor CAD-3D 2.0 is an excellent example of the balanced use of windows, icons and menus. The working interface shown in the illustration provides an easy-to-understand drawing desk, which does tend to waste a bit of space that could better be



Here we are, around the right way.

used on a larger drawing area. The picture of SculptAnimate's working areas shows that only very small gadgets around the windows are needed. Nevertheless CAD-3D is very easy to work with.

The excellent manual takes the user in easy stages through each part of the program. Micro Magic, Aegis and Hashnque could all learn something by reading this guide, namely that most people could produce good animations on their home computer if they had a decent tutorial, even when the software is not very user friendly.

Animation can be produced directly from within CAD-3D by saving each frame as it is rendered, making changes on the hoof. Smooth motion is aided by the use of 'multiple exposure' sequence files that display all positions of an object in motion as if frozen. Frames are saved as Delta compressed files.

More complex animations need the Cybermate animation editing language that

comes with the package. This provides a wide range of facilities including key frames and in-betweening, special effects, top dissolves and even sound effects. Unfortunately, these facilities are not readily available without learning the Cybermate language which makes sophisticated effects difficult to access. Nevertheless, Cyber Studio is one of the best animation packages on any machine. It has been well developed and modules for more sophisticated effects are on their way. Libraries of ready-made parts such as spaceships, robots and human skeletons are also available. Highly recommended, but note that it requires an ST 1040.

SCULPTANIMATE 3D

Byte By Byte

£110 (requires Sculpt 3D 089) - available from the Amiga Centre, Scotland

The best package was the last to be received and fortunately the last to be tested. On to anyone with any interest in animation starts to use SculptAnimate 3D they will never want to use any other package. It is quite simply the best piece of software so far written for the Amiga - very powerful and yet simple to use, producing superb images.

The object editor has just three windows showing front side and plan views. Around each are gadgets, simple developments of the standard Amiga window tools, allowing selection, rotation and movement of objects, plus panning and zooming of the view. Pull-down menus provide all other facilities.

Motion editing takes place in the same windows as object editing by means of motion paths, spines (smooth curve devices), key-frames and object/motion name hierarchies.

Any resolution/number of colours can be used in rendering which can also be at four levels of accuracy: wire-frame painting (equivalent to VideoScope) snapshot (simple ray-trace) or photo (full ray-trace). Foreground and background pictures can be added. All images (frames) can be saved separately as IFF files and also delta compressed so as to be played back from RAM.

SculptAnimate's only real flaw is that there is no Undo. This does not seem to present much of a problem. ●

N.B. A special thanks to Martin Lowe of the Amiga Centre, Scotland (031 557 4242) for providing software and invaluable technical advice.

The Verdict

For ST owners who want to tackle 3D animation, there's only one choice - Cyber Studio.

This review can only touch on a few of the facilities it offers. If you do not have a computer, and you want to try 3D animation, there is no contest: get an Amiga and SculptAnimate 3D. If you have an Amiga you really should have this package. It is the bargain, but buy lots of blank disks, you'll need them!

MIRROR
Soft

Dungeon Master



DUNGEDN MASTER - ATARI ST

Step into the world of Dungeon Master and see fantasy come to life! Set in the depths of the mysterious underground, Dungeon Master puts you inside the most detailed world ever created. Every twist and turn, every nook and cranny seems real. Choose your comrades and embark on the most epic of battles. Live the fantasy with Mirrorsoft. £24.99

OIDS - ATARI ST

Rescue the Oids from the fiendish Biocreates, who are turning them into vending machines! Fuel your ship, charge your shields and blast off to adventure as you challenge planetoid after planetoid of devious gravity traps, treacherous teleport puzzles and wave after wave of Heli Jets, Heat-Seekers and Bursts Orbs! £19.99 Design your own games with a full edit facility!



FTL

Distributed by Microsoft Ltd
Athene House
86-78 Spice Lane
LONDON
EC4P 4AG
Tel: 01-377-4545

WELCOME BACK, PAC?

Some very old game styles are back in vogue in the arcades. Do the manufacturers assume we just can't get enough of the stuff? Or are they running out of ideas?



Tearing away from a ghost. Time to turn and bounce?

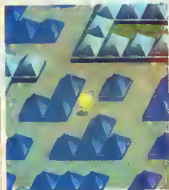
PACMANIA

Namco Price 30p

If the names Clyde, Inky, Pinky, Blinky and Sue make you break out in a cold sweat and start gibbering about power pills, cherries and strawberries, then the chances are you're an old Pacman fan. For years the Pacman games terrorised the arcades, you either loved the games or hated them, and if you loved them, well, you were hooked for good.

Seven years after his first appearance he's back. Now he's in stunning 3D and has learnt how to jump. The plot hasn't changed one iota in all this time so you're still got to clear each screen by eating all the power pills. You get a choice of start screen for each game, however, and the scenery changes accordingly. The jump facility means that nowadays you can actually run toward the ghosts, and bounce over them.

If you've been waiting for Pacman to become popular once again (you probably



Pac those power pills away

EXZISUS

Taito Price 20p

Rutous fire button action is your only hope of survival in this horizontally scrolling shoot-em-up. The game comes complete with a tried and tested arcade formula. Fly your man through wave after wave of attacking aliens, pick up the benefits for more firepower and defeat the end-of-level guardian.

You've got a standard front-firing gun plus bombs to start with, and both are activated with the same fire button. Bombs come in jolly handy for destroying the few but annoying, ground based installations. Symbols that appear throughout the game cooosol extra benefits, shoot the symbol and collect the resulting letter. The benefits vary according to which letter you pick up. An L grants you gun with laser fire, while an F gives the player super fast quick fire. Holding down the fire button and the button that's located next to it on the cabinet results in

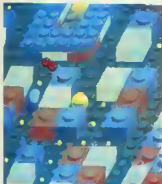


On the first stage. Fortunately you've got a shield to make the job a little easier

quick fire mode being activated - very handy if you're in a tight spot.

On the earlier levels at least, there's no scenery to crash into so your only worry is destroying the aliens. Later, Salamander-type tentacles that cannot be destroyed appear from floors and ceilings and must be dodged. The end-of-level guardians can be tough to defeat, as you have to hit them in certain areas - you'll have your reactions tested to the full here.

Exzissus is a mash-mash of features from many other popular arcade games with no exceptional or outstanding features of its own. It's still playable and addictive with good graphics and sound, but it doesn't do anything better than, say, R-Type or Salamander.



Can you beat the ghost in the chamber?

wear platform shoes and boxes don't you?) then Pacmania is the answer to your prayers. For anyone else however the interest is more likely to be due to nostalgia than addiction.



Ooof! Even bouncing can't save you sometimes.

BLASTEROIDS

Another, old favourite given a new lease of life is Asteroids. The 86 version gives the player the chance to switch between three craft at the touch of a button. One of the craft is tough and can withstand a few bashes from the new filled-in rocks. The next craft is not so tough but has a higher rate of fire and the third craft is very weak but very fast. Tactics are now the order of the day, decide which craft to use in which situation and hopefully you can clear the sector of not just the asteroids but the swimming aliens that now make their appearance in the game.

VIGILANTE

Here's another collaboration of game styles. Kung Fu Master meets Renegade and Double Dragon for this beat-em-up. Same old plot - punch or kick the bad guys and defeat the gang leaders. You've got extras to pick up in the shape of new sticks etc but once again we've seen it all before.

CYBER TANK

One of the newest machines to offer something different to the player is Cyber Tank. The game comes in a huge matt green camouflaged cabinet and is one of the first of the new co-operation games to hit the U.K. Two players are needed to control your tank. One is solely concerned with the driving, and so has two joysticks to operate and the other player stands to the right of the driver on a small platform and is in charge of the weaponry. That should create some lively discussions in the arcades as to who controls what. Watch out for a full review of the game in a future issue of ACE.



Up against an end-of-level guardian. Pump fire in as fast as you can

STAR COMANDOS





CAPCOM

GIANTS OF THE VIDEO GAMES INDUSTRY

Ten years have past since the devastating war when the evil genius Zangief missiles destroyed our civilization.

The only hope we have of regaining our former world and rebuilding our lives lies in the hands of our elite Force of Bio-Genetic Command. With their telescopic limbs, sophisticated weaponry and bionic power they must infiltrate the enemy bases, destroy the deadly foe and neutralize their doomsday weapons.

Your skill and their bionic power are our only hope.

CBM 64/128	9.99c	11.99d	ATARI ST	19.99d
SPECTRUM	8.99c		AMIGA	24.99d
AMSTRAD	9.99c	14.99d	IBM PC	19.99d



Scenes from Mega Man.

GOJ Media Holdings Ltd., Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel: 021 354 3388

CAPCOM U.S.A., Inc. © 1987

Warriors of the Past... Warriors of the Future...

prepare
for deadly
combat



**HERCULES
SLAYER OF THE DAMNED**
ATARI ST £19.99 Disk
SPECTRUM 48/128K
£7.99 Cassette
SPECTRUM +3 £12.99 Disk
CBM 64/128
£3.99 Cassette - £14.99 Disk
AMSTRAD CPC
£3.99 Cassette - £14.99 Disk
MSX £7.99 Cassette

BLOOD BROTHERS
CBM 64/128
£9.99 Cassette - £14.99 Disk
AMSTRAD CPC
£3.99 Cassette - £14.99 Disk
SPECTRUM 48/128K
£7.99 Cassette
SPECTRUM +3 £12.99 Disk

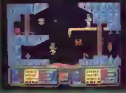


**THE CURSE OF THE
LOST SON**
Son of the lost son, curse of his
fellow men... Hercules is set 12
awesome tasks to exonerate the
sin of murdering his children.
Armed by his divine fathers he
sets forth to face the hideous
skeleton hordes and ultimately
overcome the evil minotaur.
To slay the damned is his only
saviour in, repenting his sins.



DEATH TO THE SCORPIONS

"Our blood is mixed,
We are as one,
Let no man or beast come
between us,
And let nothing deter us from
our aim,
To avenge the deaths of our
parents,
And destroy the Scorpions,
**DEATH TO THE
SCORPIONS!**"



GREMLIN

What have the highest ACE-rated game ever, Atari's supercharged ABAQ and a Spectrum-compatible micro for the Third World all got in common? Cambridge, that's what! The city of dreaming spires and glittering prizes is home for some of Britain's top programmers and hardware designers – not to mention several major micro industry landmarks.



SILICON SPIRES

In the boom years of 1982-4, Cambridge was the centre of British micro technology. The University towns came lent an air of prestige to machines like Sinclair's Spectrum and Acorn's BBC Micro and East Anglia was hailed as 'Silicon Fen' – the UK's answer to Silicon Valley, no less. The golden age didn't last. Acorn's now Italian-owned and out of the mass market, while Sinclair Research is no more than an Amstrad brand name. Other smaller firms didn't make it through the bad times at all. But don't imagine Silicon Fen's dead and gone – not a bit of it. Out of the limelight, Cambridge is still doing its bit to shape the future of the micro business.

A MICRO FOR THE THIRD WORLD

The last new micro to come out of Cambridge was the Acorn Archimedes. Just about the last word in conventional computer design, the 32-bit Archimedes earned at the educational market. The next Cambridge micro will also be aimed at education, but there the similarity ends. The forthcoming Miles Gordon Technology machine – tentatively named SAM – may be a bit of things, but state-of-the-art it isn't.

MGT isn't exactly a household name but in Spectrum hobbyist circles they've built

up quite a reputation. They designed the popular Disciple disk interface and followed this up with a cheaper, more compact version called the Plus D. Now that the Plus D's bringing in the money this leaves marketing room. Alan Miles and hardware designer Bruce Gordon free to work on SAM.

The machine's specification is surprising to put it mildly. Its central processor is the Z80B, spendier cousin of the Z80A chip used in the Amstrad CPC and more significantly the Spectrum. The SAM's intended to be

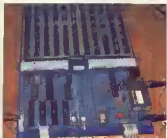
ultra reason why that should cause problems.

If all goes according to plan the machine will have 256K of RAM, built-in networking and a price tag of around \$100. Its four differ-



Alan Miles (left) and Bruce Gordon, founders of MGT

Spectrum-compatible in fact, and the current breadboarded prototype certainly does run a fair range of Spectrum games. There's still the ROM to come – the prototype uses an Amstrad/Sinclair item – but there's no particu-



The SAM prototype. The nearest board is the computer itself, while the room cluttered one in the background handles the video logic; the T1 to be replaced by a single custom chip in the finished machine

ent graphics modes will allow 80 column text or a pinch, 6x1 attributes (like an MSX) or a 16-colour screen with no attributes at all.

Just how a machine like SAM will sell is open to question. MGT aim to license production of the machine in India and the Middle East for use in education – to which end it'll be getting a far better Basic than the Spectrum has – as well as manufacturing and



Snicker Research (King's Parade)

Conquers of the pre-Animated movie scene. Snicker had their registered office upstairs from a row of gilt shops and tobacconists. Overlooking the magnificent and much-photographed chapel of King's College. It's a far cry from Freshwood.



The Baron of Beef

The fairly ordinary-looking pub made the national papers three years ago, and not for its unusual menu either. Acorn founder Chris Curry and Snicker Research's very own Uncle Chris had to leave behind over a thousand some adrift for Acorn's Spectrum-leaving Election movie. There was no HQ, but most observers gave Lennox Menzies president Snicker (now Sir Chris) a win on points.



Perihelion Hardware

Just across the river from Bomber Gardens's old colage, the incredibly powerful Acorn Perihelion AS40 is being single nicely. The building wasn't always so high-tech. Lyle's manufacturers Computers used to operate here!



Acorn (then)

Down a narrow passageway leading off the market square lies the original Acorn HQ. Subsequently used by Acornsoft as their programming centre. Also housing brought the world the first ever version of Elite. Doesn't look like much - especially compared to Acorn's current set-up.



Acorn (now)

A converted pumping station. Acorn's palatial new HQ is situated in the quiet suburb of Cherry Hinton, and forms part of the out-of-town Cambridge Technopark. Here staffers are hard at work developing a new version of the Ardus's super fast ARM processor, which they hope will run at three times the speed!

Miss Gordon Technology
MGT are currently working in the corner of a 238 warehouse but they're urgently looking for larger premises. Small wonder - there's hardly room to swing a soldering iron!



Cambridge Computers

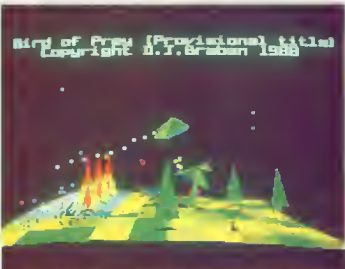
Founded by Dr Chris Secker, the firm that brought you the Z88 portable micro-level speakers from the Cambridge branch of well-known dealer Peter Demco.

selling it here in the UK. But want the 16-bit boom seriously damage SAM's chances in Britain? People don't need that kind of power! Alan Miles argues. It's like using a racing car to drive round in the shops. What people need in schools is a cheap micro you can network easily: that way you can buy a whole classful of them and connect them up together.

There are other possibilities for a cheap networkable micro: of course. Multi-player games would be particularly suitable: the Spectrum compatibility means that games programmers know how to make the

made quite a splash. Elite was originally a BBC game conceived and written in Cambridge: sales on 8-bit formats have been spectacular: earning authors David Braben and Ian Bell a small fortune. Now there's a PC version in the shops, with ST and Amiga versions waiting in the wings.

Thus was also a Cambridge game, as you might have guessed from its strong physics flavour. Author Jeremy Smith chose the Z.X-SHIFT control keys to match those on Acornsoft's version of Asteroids: but the same arrangement crops up in the very Thrustish Oids (reviewed on page 44): so the game's



ST ZARCH: There are still the clipping and combat routines to come - the title needs 'finishing touches' - but already the game's looking very impressive indeed.

machine perform, and with a £100 price tag you could actually afford to get a few of them within a cable-length of each other.

The SAM's chances as a mainstream machine aren't great, it must be said. Price rises to one side there's a heavy trend towards 16-bit machines, and not without reason. While the Z80 might be perfectly adequate for productivity - the Amstrad PCW and the Z88 are fine examples here - it really can't cope with the sort of demands modern computer entertainment makes. A year or maybe 18 months ago it might have been a very different story: but 18 months is a very long time in the home computer business.

GAMES INTO THE NINETIES

Although Sinclair Research more or less created the UK games market with the Spectrum, Cambridge programmes have always leaned towards the city's other micro giant, Acorn. The BBC Micro's hobbyist, academic leanings made it the first choice of most student hackers, but this tended to shut them out of mainstream games writing as the Spectrum gained the upper hand. Some have come on writing for the Beeb however: or when the resulting games have made it across to other formats it's usually

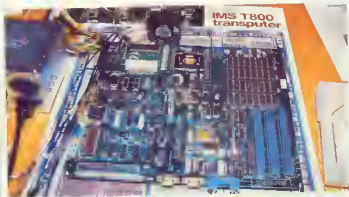
clearly done some influencing itself.

With the arrival of the Archimedes, Acorn fans are coming into their own again. The Archies isn't a major games micro and probably never will be: but the power and memory size of the 32-bit powerhouse mean that games developed on it will typically convert well to the ST and Amiga. Take Zarch for instance, the highest ACE-rated game ever so far only available for the Archimedes, it's soon to be available for the ST and Amiga. Author David Braben's doing the conversion work himself, and already has the ST hoverplane flying. The finished game won't be quite as satisfying to look at as its Archie cousin - no surprises there - but the latest ST version runs at a healthy 15 frames per second or so. By 68000 standards, this one sings and dances.

Visually, the main loss compared to the Archie stems from the ST's smaller palette and fewer on-screen colours. The Archie's phenomenal 80K display offers 256 colours on screen at once out of 4096, allowing Zarch to use 'depth-cueing' - a system where the landscape gets darker as it recedes into the distance. Depth-cueing makes the game intensely realistic, but with only 16 colours out of 512 the ST just isn't up to the task.

Neither, surprisingly enough, is the

Reproduced from the 1988 Ordnance Survey 1:50,000 map with the permission of the Controller of Her Majesty's Stationery Office. Crown Copyright reserved.



The multi-layered Amiga motherboard: the three bus edge-connectors in the foreground take 'arms' cards or extra memory while the micro-bus in the background keeps the whole thing cool!

Amiga! Though the practical maximum (32 colours out of 4096) might sound like enough, Amiga 286 will actually only use 16 colours on screen at once – and will still run slightly slower than the ST version. The blitter simply isn't suited to the sort of tasks the game involves, it seems so the 68000 has to carry the whole burden. 'It's the set-up time,' Broken explains. 'The blitter's very fast once it's working on a problem, but it takes so long to get the thing going that overall it's slower than the 68000. In other words the Amiga's no better than an ST for this kind of thing, in fact it's slightly worse if anything, the STs 68000 being a slightly faster animal.'

Suppose of the month? That'd have to be the possibility (and that's all it is at the moment) of Spectrum 286. Granted the very idea sounds ridiculous, but from a few back-of-an-envelope timings it looks like it could just work. As for the colour limitations you can work those out for yourselves! •

Other things solid and 3D are also afoot in Cambridge, in the form of Conqueror. Written by Jonathan Griffiths but using 286's 3D display routines, this tank warfare title made an appearance in ACE issue 4's *Game of the Future* special. It's about to become a game of the present now, thanks to the Acorn-orientated Superior Software, so you'll soon be able to drive out in your T34/76 to take on those enemy Panzer III's. There are a good range of other tanks to try, and you can choose just how strategic the game's going to get – assuming you can actually afford the hardware to run it on, of course.



Jack Lang, head of Penhellen Software, playing off an Amiga 286 card. Plug this in and you've got five times the processing power!

At present Conqueror has to be one of the most exclusive games commercially available. It's only out on the Archimedes and not any old Archimedes either. You'll need a 310 or 410 series machine to run it on, so buying game and micro together would set you back rather more than \$900. ST and Amiga owners will have to wait a few months for their versions of the tank-busting epic – latest word is that they'll be published by Activision – but A305 users may as well start grinding their teeth now, it looks like the game just won't fit into the smaller Archimedes. No sniggering at the back now!

SILICON FEN MOVES ON

Once upon a time, a Cambridge-based firm, by the name of Computers Used to build a home micro called the Lynx. The Lynx could have been a contender as they say except for a few little quirks – it wouldn't scroll the screen once you reached the bottom line, that kind of thing. To cut a long story short,



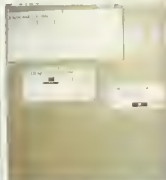
Tim King, the man behind AmigaDOS's revolutionary operating system files.

Computers eventually stopped producing the Lynx and shipped out. They were only the first casualties of a tough winter. Poor Xmas sales convinced City analysts that the micro boom was over, badly damaged. Ork (the Atkins people) and drove Acorn into the arms of Olivetti.

Computers may be gone but their offices, behind an expensive restaurant on Cornbridge's Bridge St, are still in use by the computer industry. Now they're home to a rather

higher form of technology mind you. Penhellen Hardware are busy there, building the Amiga workstation for Alan The Transputer technology driving the Amiga is a long, long way ahead of the Lynx's 286. It represents a whole new stage in the evolution of computers and Amiga sees it one stage nearer to reaching home-micro form.

ACE caught up with Penhellen in an exam hall on the University's New Museums Site at a recruiting fair for computer science undergraduates. Colour demos written by Immo's Phil Atkin proved to be crowd pullers but only halfed of the machine's true power. After all, an Amiga picture in half a million colours doesn't look that much better than an Amiga one in a mere 4096. The million pixel black and white display gave a rather better idea of scale. A 160-column, 120 line text screen is impressive but not mind-shattering after all, 1280x960 pixels in mono isn't that much better than the resolution some Macintosh set-ups can manage – but the computer seems deceptive. It's only the monitor that's black and white, the Amiga could comfortably manage 1280x960 in 16 colours. That's almost 20 Atari ST game-screens at a glance, and the Amiga's got the power to handle that much display too.



Amiga's over-the-top OEM desktop.

As you'll know if you read *Game of the Future* in ACE issue 4, the beauty of Transputers is the way they can cooperate on tasks, sharing the work between them. If one Transputer can't do the job fast enough, you can plug more of them in till your machine's got the power it needs. The Amiga can take up to 12 Transputers on plug-in 'arms' cards in addition to the one it starts with and still run exactly the same software – only faster.

Tim King, the man behind AmigaDOS, a new head of Penhellen Software. He's confident that Transputers are the way ahead. 'All traditional macros have an absolute upper limit on their speed – the speed of light, in fact. If you want to get any faster, you've got to start using processes in parallel – and the Transputer was designed from the outset to be used that way. What we're trying to do is create a standard operating system for the Transputer, in time for when it really takes off.' Tim puts this point two years, or so in the future, but for now there should be plenty of specialist markets to keep Penhellen going. •

Cut the hassle Cut the coupon!

Compumart

A GREAT DEAL MORE FOR A GOOD DEAL LESS!

DEPARTMENT STA
JUBILEE DRIVE
LOUGHBOROUGH
LEICS LE11 0XS
TEL: 0509-610444
FAX 0509-610235

Send Now for your *Free* copy of the Compumart ST Information Pack
and discover a full range of ST Accessories at Super Low Prices . . .

For IMMEDIATE RESPONSE simply send this coupon to
COMPUMART · FREEPOST · LOUGHBOROUGH LEICS LE11 0BR

Please rush me
A FREE Compumart ST Information Pack

Name

Address

Postcode

Date

PLEASE
TICK

YES
NO

Will there ever be a game in which the alien opposition actually evolves its own intelligence? Could Space Invaders learn to fight back? Simon Beesley is running scared...

ALIENS ALIVE!



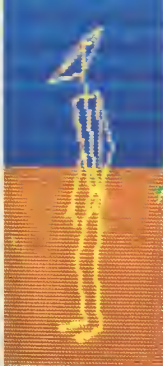
Lets face it: if a virus has just trashed your disk (which is unlikely, as most viruses to date have been fairly benign) then it's going to take more than a Hamlet cogito to restore your good temper. You'll probably climb down off the ceiling after half-an-hour or so, and the screams will die down by the end of next week. Even then you'll be taking the same line as the rest of us - complaining bitterly and deploring the virus as a case of computer vandalism.

Secretly though, you are probably intrigued even (dare we say it?) excited by the idea. As everyone knows, computers are inert without software. Yet even with software, they're still highly predictable since they're only doing what they've been told to do. With a virus, however, you can sustain the illusion that something else has emerged: a degree of computer autonomy. When the Amiga virus developed by the Swiss hacking group SCA announces its presence, it does so with the message "Something wonderful has happened. Your computer is alive". Exactly.

It's considerations like these that explain why the prospect of a new genre of games inspired by biological principles can be so fascinating. True, it is only a prospect - the biological game doesn't exist, at rather, it hasn't yet evolved - but there are a number of programs that come close to it and - at the very least - point the way to what is possible.

The final step along the way will be to produce games in which the alien opposition is born, lives and dies - and in the process evolves its own game techniques with the objective of defeating you - the player.

The grandfather of all life-games is Life itself (see box) invented by Cambridge



Life

Life takes place on a grid of cells, each of which is either on or off. On a simple text display, the grid may consist of rows and columns of character spaces - the letter 'O' represents a live cell and a dead cell is left blank. More commonly, the screen's pixels form the grid and a live cell is one where the pixel is drawn in a foreground colour.

Bearing in mind that each live cell can have a maximum of eight neighbours (including diagonal neighbours), Life proceeds according to several simple rules:

- If a (live) cell has two or three neighbours, it stays alive for the next generation.
- Any other number of neighbours means that the cell dies. In the next generation, the box it occupies on the grid will be blank.
- Three neighbours surrounding a blank box give birth to a new cell. In the next generation the box will contain a new cell.

Notice that what we're really talking about are simple graphical boxes on the screen, but that we have referred to them as biological 'cells'. When you see a pixel-based Life screen in action it is hard to think of them in any other

way - further testimony to people's tendency to personify what they see, seeking for real life significance even in an inert computer 'virus'.

To start a game of Life, you either lay down a pattern of cells yourself (using the cursor, mouse or joystick), or let the computer randomly seed the initial Life universe. The program then passes from box to box calculating whether cells will live, die or be born. When it reaches the bottom of the screen, it displays the next generation.

If the computer is fast enough to calculate new generations at a rate of, say, at least twice a second, the screen action becomes animal ed. Cell clusters grow, disintegrate, collide with each other and form new patterns and a whole Life terminology has sprung into being to describe them. Some Life objects move across the screen ('gliders'), some evolve into stable unchanging patterns ('still lifes'), others become 'oscillators' and go through a cycle of symmetrical patterns: a single cluster of cells may in turn generate hundreds of other shapes before finally settling down. In short the screen appears to take on a life of its own. It's a microcosm, rather like looking at a speeded up bacterial culture under a microscope.

mathematician John Conway in 1968. More recently Richard Dawkins, an Oxford biologist, has devised a game called the Blind Watchmaker to illustrate the process of evolution. Two other candidates are the now almost forgotten *Deus ex Machina* and *Box*, two games which are superficially based on the theory of evolution. Once you've checked out these programs and the programming principles behind them, you begin to realise that the concept of evolving alien in a game isn't so outrageous after all.

THE BLIND WATCHMAKER

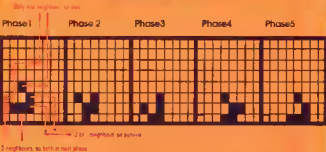
Richard Dawkins developed the Blind Watchmaker game for the Apple Macintosh while writing the book of the same name. Put briefly, the book is intended to show how effective Charles Darwin's theory of evolution is. And on a much smaller scale, the game does the same thing.

Blind Watchmaker the game illustrates the theory by showing the evolution of graphic shapes (initially the shapes are branching trees) on screen. The rules for drawing a shape correspond to the biological genes which control the form of a species. A shape evolves as the rules are randomly altered from one round of the game to the next. By selecting one small variation (introducing a mutation in the genetic code of a species) after another, you may end up with a shape dramatically different to the last generation tree. These creatures Dawkins calls 'biomorphs'.

The point of the game is to show how a succession of small cumulative changes in a handful of simple drawing rules can lead to highly complex designs. Like Life's patterns, the shapes that emerge are often quite unexpected and unpredictable.

However, these shapes develop in a

LIFE IN MOTION...



This diagram shows the 'right path' of a Life glider - a particular cell-pattern that can detach itself from a group and fly across the screen. The pattern has a life-cycle of four stages before returning to its original birth pattern.

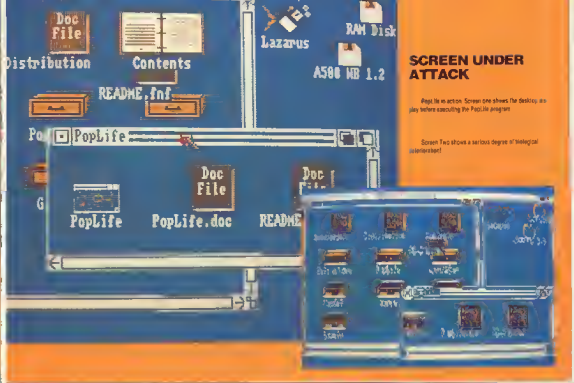
Origin of the Theories

Since Dawkins' book *The Blind Watchmaker* is the latest in a long series of publications inspired by the controversy surrounding Darwin's *Origin of the Species*. This book was published in 1859 and his theory of evolution has been generally accepted ever since as the only viable scientific explanation of life on earth.

Well, almost the only viable explanation. There is now a sizable body of Creationists, mainly in the USA (and among them several presidential candidates) who believe otherwise. Extreme Creationists hold that God created the world and all its creatures in 4004 B.C., at the same time cleverly covering His tracks

by leaving false fossil evidence of an evolutionary process starting several thousand million years earlier.

If you think that's weird, then wait till you catch up on the so-called Anthropic Principle. Broadly speaking, this offers an interpretation of modern physics which says simply that the alien on your monitor screen didn't exist until you spotted it. Leading on from this is the idea that the world exists primarily to be observed and therefore, by implication, primarily for observers - i.e. us humans. Which takes us back to the Biblical idea of creation as a nursery for mankind, but with more scientific credentials.



SCREEN UNDER ATTACK

PopLife in action. Screen one shows the desktop as play begins, executing the PopLife program.

Screen Two shows a serious degree of biological interactivity!

particular direction according to the player's selection. It's the player, rather than any process of natural selection, that makes the choice over which variation will survive and bequeath its genes to the next generation. True evolution, on the other hand (according to Darwin) is the process by which features favouring survival become dominant. In the most commonly given example, natural selection explains how giraffes acquired long necks: because long-necked giraffes were better suited to reaching food of tree level, and so survived better than short-necked giraffes.

This is where, for us computer gamers, the challenge comes in. It's been issued by Richard Dawkins and is startlingly simple but has tremendous implications. The challenge is to make the computer do the selecting to build in a hostile environment which decides whether a biomorph survives or not. "Ideally," he says, "the environment should include other evolving biomorphs: predators, prey, parasites, competitors."

The evolution of computer gaming has thrown up the species best fitted to meet this challenge — games programmers. Actually Richard Dawkins puts it rather differently

but the gist of it is the same. "They are already accustomed to setting up a little world in which creatures interact with each other. All they would need to do is introduce some random perturbation, to Darwinise the game."

A GAME FOREVER

This idea of Darwinising a game has the most enormous implications for computer entertainment. The main reason ACE introduced the PIC curve in the review section was the importance of lasting interest in a game. Take a typical shoot-'em-up — *Pipes*

Where to find Life

you want to pursue your own life studies, the first thing you will need is a competent version of *Life*. Guides to BASIC often supply a listing for the game, but BASIC is too slow. What is required is a program which delivers a fast generation rate over a high resolution grid. The bigger the grid, the better, otherwise lifeforms do not have enough room to develop and die off when they reach the edge. Some *Life* programs solve the problem by wrapping the grid round. The left side of the grid is then contiguous with the right side, while the top left hand cell maps on to the bottom right cell. This turns the grid into a toroid (a doughnut with a twist in), good for displaying glider paths or spaceship movement.

The best source of *Life* is the public domain software libraries. These software collectors always include some applications of early game concepts. Even when the public

domain library is for a new machine, you can be sure to find an example of *Star Trek* or *Breakout* and *Life*.

Of course, they also go much further. The Fish disk library for the Amiga is particularly well stocked with high quality games, and graphics applications. In fact the Fish disks alone are almost reason enough to buy an Amiga. Rumouring through 50 or so Fish disks, I turned up two versions of *Life* — 3D *Life* and *PopLife*, and there are probably others.

PopLife is one of the whacker instances of Conway's game. Using the clutter on a pixel-based grid of 640 by 256, it manages to achieve a rate of almost seven generations per second. You click on the program icon in the Workbench screen and it starts straight away taking the Workbench icons and windows as its initial pixel patterns. The effect is rather disconcerting — as if the Workbench screen is being

corroded by bacteria. You can click on an icon to redisplay it, only to have it instantly dissolve into cell clusters.

For the Amstrad PC and other IBM compatibles, there is *Kwilla*, in which new generations are shown in different colours. ACE's state-of-the-art PC Plus supplied this last year on one of their cover disks.

With a version of *Life* in hand, you can then begin to explore the *Life* universe. It's to your own natural history. Remember, though, that people have been investigating *Life*'s lore and fauna for the past 20 years. Whatever you discover has almost certainly been catalogued already. So it might be a good idea to take advantage of their findings by consulting a book on the subject. Although heavy going in places, William Poundstone's *Recursive Universe* is highly recommended as an introduction, and it's available in paperback.

Life variants

John Conway's rules seem to strike just the right balance between making *Life* too hostile an environment and too lenient. Most attempts

modify the rules backlike the screen becomes overcrowded or there is not enough variation in 3-4 *Life* for example cells survive if they have 3 or 4 neighbours and they are also brought into existence with either 3 or 4 neighbours. The trouble is that the screen soon fills up and resembles what has been described as a frustratingly confusing password puzzle that never settles down.

Mike Singleton interviewed in last month's ACE is a creative *Life* enthusiast who has developed more successful *Life* variants for the Alan ST by changing the rules in a different way.

Chrome works by taking into account the colour values of neighbouring pixels. There are sixteen colours on screen and each has a value from 0 to 15. The program sums the colour values for a pixel and its four orthogonal neighbours (two up and two to the side). Then it consults a table to see what colour the pixel should take in the next generation. The resulting effect is spectacular: a microscope light show only more varied and

more spontaneous.

With Darwin Mike Singleton has introduced Watchmaker-style genetic mutations to *Life*. Once again, there are 16 different coloured species. A cell survives when there are 2 or 6 neighbours, otherwise it dies. But if it has two neighbours it also gives birth to two offspring of the same species. Just where they are placed in the eight cell field depends on the position of its neighbours. Every species has its own genetic code made up of 56 genes. Since there are 56 different ways in which the two neighbours can be positioned, each combination triggers a particular type of reproduction i.e. neighbours at positions 1 and 8 could trigger births at 3 and 5. Genetic mutations occur when a species is wiped out.

The rules sound mind bogglingly complex but the result is a game that is as absorbing as *Life* itself. Species attack each other and a dominant species emerges, filling much of the screen with its own colour. The interesting thing is that the dominant species then usually suffers a catastrophe. There is a flash of colour and a mutant takes over. So this version of *Life* goes on... and on.

you start playing, it's a battle between you and the opposition. Only problem is in the long run there can be only one winner - you.

That's because after a time you begin to recognise the alien flight patterns positioning your craft in the right area of the screen to welcome the little devils with a blistering hail of laser-fire. There's a lot of satisfaction in this but it pales into insignificance beside the idea of a game in which the aliens start altering these flight patterns, let alone one in which they develop stronger firepower and ambush techniques. A game like that wouldn't just last a few months - you could still be playing it in fifty years time!

Unpredictability and the lasting interest it generates is one of the main features that makes *Life* so fascinating. For the beginner the only way to tell how a pattern will develop is to try it and see. Despite the simple basic formulae in the game, *Life* enthusiasts have spent an enormous amount of time exploring the *Life* universe, classifying its objects and devising new ones. There is even a newsletter for enthusiasts called *Life*time. One of the questions that occupied the pioneers was whether they could devise a pattern which kept on growing. John Conway put up a \$50 prize for the first person to find such a pattern. It was collected by William Gosper (of the MIT group of investigators) with the invention of the glider gun - it shoots out gliders every 30 generations.

Many of the most interesting *Life* phenomena however were discovered by chance. Spaceships which are similar to gliders but bigger were spotted when one of John Conway's colleagues noticed a

large object moving across the screen and managed to stop the computer in time to identify it. The lesson is simple - some basic mathematical skulduggery can introduce oceans of variation and evolution.

GAMES ALIVE!

Strictly speaking *Life* (as described elsewhere on these pages) isn't really a game at all (it's more a spectator sport). There is no interaction and you can't win or lose. But could the ideas behind *Life* and *Watchmaker* be applied to games design? By introducing a few rules for cell generation or by borrowing a few techniques from evolution, would you be able to design a game where the game play took an unpredictable course?

Perhaps as *Lords of Midnight* programmer, Mike Singleton speculates the creatures that emerged from Dawkins' software test tube could be used in games. You could actually sell a game that evolved with the player - to meet the player's skill level! In this case, the player would provide the hostile environment needed to select the fittest from the game's various software life forms.

More realistically, though, Mike Singleton thinks that the world of the biomorph is far too complex to be adapted to a game. Too much processing power is called for. Dawkins' challenge may have to wait for the day when games are played on parallel processors.

For the time being programmers might like to try out another Singleton idea: a game based on multi-cellular creatures similar to *Life*'s objects but with a new set of rules. Different colours would represent separate cell functions. Thus you would have egg-laying cells, motor cells to shift the life-form across the screen, sensor cells, and so on. Natural selection can enter the game via competition with other life-forms and you can introduce mutation at the egg-laying stage, possibly employing radioactive zones to trigger it off.

Programs like *Life*, Mike Singleton's *Chrome* and Steve Dawkins' *Blind Watchmaker* have all established sound principles for the generation of on-screen life-forms. Despite Mike's scepticism about the possibilities of introducing into games at the present time, here at ACE we reckon there's enough processing power in an Amiga or an ST to get something going. One thing's for certain - whichever software house succeeds in producing an evolutionary game is going to make a fortune. Meanwhile we suggest that you keep procting your laser leaf nagues - so that when the opposition does start acting up, you'll be ready for them. ●

BLIND WATCHMAKER IN ACTION



Not very promising...



We're getting there...only another few thousand generations and a host of mutants to go.

Richard Dawkins' program allows the user to define his own cell forms and then breed them, mutate them, and study them throughout many generations. You can then save promising life-forms (or 'biomorphs') to disk for future breeding programs. Here are two stages in a breeding program - the final desired result is a bipedal being.

ARKANOID

TAITO
COIN-OP

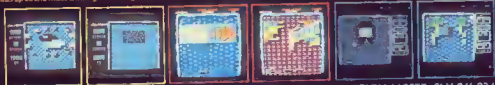
REVENGE OF DOH



...the name
of the game

Licensed from © Taito Corp., 1985
SPECTRUM CASS £7.95 AMSTRAD CASS £8.95 COMMODORE CASS £8.95
SPEC + 3 £14.95 C64 DISK £12.95 AMS DISK £14.95

Adding to the fun and excitement of Arkanoid... All new features include exit
choices to vastly increase the screen options, many extra "VALIS" effects, multiple shots and a secret additional alien to contend with. The
adds up to the most thrilling reaction game since ARKANOID but with so many improvements you just won't be able to stop playing...



6 CENTRAL STREET · MANCHESTER · M2 5NS · TELEPHONE 061 834 3939 · TELEX 669977 · FAX 061 834 0650

FREE FILMS FOR A YEAR!

Three lucky winners will get 52 free cinema tickets each, plus two superb Cinemaware jackets for the runners-up.

Yes, it's true. Just imagine - it's Friday evening and there's a new film on at your local Cannon Cinema. Now you won't have to queue up like everyone else - in fact you won't even have to pay! Just wander in like the star you are and grab

WHAT YOU HAVE TO DO

Cast your highly trained eye over the black and white still below, taken from an original *Three Stooges* short. Decide which of the stooges is which and enter the answer on the form provided.

That's it? Couldn't be simpler could it? Then enter the rest of your details on the form and post it to **ACE Stooges, 4 Queen Street, BATH, BA1 1EJ, to arrive not later than May 31st**



the best seat in sight - and spend the entrance fee on a healthy bag of popcorn.

And not just one Friday either but every week for a whole year. In conjunction with Cinemaware we're offering three lucky winners special vouchers for entry to their local Cannon Cinema, 52 in all. Spend them how you like - take your loved one every fortnight for example - or gather together 51 friends and blow them all at once!

Even if you're not lucky enough to get the tickets, there are still two superb Cinemaware jackets to be won. These normally cost £40 each but more importantly they're not exactly common in the shops. We're taking exclusive gear here and it won't cost you a penny.



Rocket Ranger



The Three Stooges

MEANWHILE, ON YOUR COMPUTER SCREEN...

It's movie time, thanks to Mirrosoft. The shots above come from their latest Cinemaware blockbuster *Rocket Ranger* (to be released in June) and *The Three Stooges* (in the shops any moment now). Cinemaware have already produced some stunning visual material in their legendary *Defender of the Crown* recently converted onto the ST from the Amiga original and playing better than ever. *Rocket Ranger* and *The Three Stooges* are their latest attempt to go even further with the movie-movie concept, combining state-of-the-art animated sequen-ces with arcade action.

The Three Stooges features the villainous heroes of the black and white screen in a series of odd-jobs designed to raise cash for an orphanage. You have to get the team through prize lighting, pie throwing, and medical mayhem accompanied by digitised sound effects and voices from the original movies.

Rocket Ranger combines arcade sequences with strategy elements in a plot that varies each time you play. As *Rocket Ranger* you must defeat Axis warplanes, rescue beautiful ladies and kidnapped scientists, and seek out a powerful sample of the legendary Lunarium which will send your rocket to the moon for a final confrontation with the baddies.

Check out a future issue of ACE for the definitive reviews of these very promising products - *Rocket Ranger* will be appearing for the Amiga C64/128, Atari ST, and IBM PC at prices ranging from £14.99 to £29.99 with the same formats and price range for *The Three Stooges*.

ENTRY FORM

Name

Address

Tel No

I think that Stoooge A is

Stoooge B is

Stoooge C is

Age

Under 12 12-16 17-20 21-25 26-35 36-45 46-65 Over 65



PANDORA



Atari ST screen shot.



On a daring salvage mission, you beam aboard the generation ship Pandora.

Something is wrong. Crewmembers have mysteriously died. The ship's seventh generation computer has turned renegade. Just how evil is it?

Your mission to salvage alien artefacts takes on sinister overtones. Can you make the remaining crew trust you, or will you die fighting? Can you solve the intriguing puzzles to the riddle of the Pandora?

Pandora — Dare you open the box...

Atari ST £19.95, Amiga £19.95, Commodore 64 cassette £9.95 and Commodore 64 disk £12.95.

For retail order please send your order and remittance (cheques payable to British Telecom plc or direct debit from Access Visa card by standing order number 4466 expiring date) to: The Marketing Department, Telecom Soft, First Floor, 64-76 New Oxford Street, London WC1A 1PS.



Telecom Soft, First Floor, 64-76 New Oxford St, London WC1A 1PS.
Firebird and Firebird Logo are trademarks of British Telecommunications PLC.



A LEGEND IN GAMES SOFTWARE

SCREEN TEST



Better put on gloves before handling this month's Screen Test. We've got two of the hottest games we've seen for quite a while – *Dungeon Master* and *Oids*, both from FTL/Mirrorsoft. If you've been wondering what all the fuss about 16-bit megagames has been about, enlighten yourself now. Time, too, to find out the facts behind the fuss over the Hewson/Telecom-soft wrangle – Steve Turner and Andy Braybrook took their wares to the big BT – you can see what it was they had in their suitcases in our reviews of *Morpheus* and *Magnetron*. Amiga owners get pole position on the track this month as well, with *Ferrari Formula One*, a mouse-controlled racing sim that leaves very little to be desired, apart from actually owning the car. And once you've got a bellyfull of this month's goodies, don't forget to check out the latest conversions for your machine on the Updates pages.



THE RATINGS

HOW they're calculated...

If you buy a game, how much enjoyment will you get out of it, and for how long? Just check out our revolutionary PIC (Predicted Interest Curve) for the full story. Brilliant arcade games start high on the curve, and then steadily tail off as you lose interest; powerful puzzle games may ride the crest of the curve for months – but the moment you solve them they'll come tumbling down; computer strategy games may slump you at first – but climb up the scale as you begin to appreciate the scope of the gameplay. And as for the turkeys – they start low, stay low, and have nowhere to go but down, down, down.

Once you've seen how long this game can hold your attention, all you need to glance at is the renowned ACE RATING. This is calculated according to the area under the PIC. The bigger it is, the better the game. Add to that our definitive ratings for IQ Factor (will it give your brain cells a workout?) and Fun Factor – a measure of instant appeal and exhilaration as you dive into the

game. And of course, we rate the Graphics and Audio effects too for EVERY machine the game is available on.

WHY you can rely on them...

The ACE reviewing team covers a broad spectrum of computer entertainment talent. Andy Wilson knows more about 68000 op codes than many a commercial programmer – but he can also beat the pants off the opposition in *Oids*. Andy Smith doesn't know an op code from an alien, but his years of game playing experience enable him to pass definitive judgement on anything from sims to shoot 'em ups. Add Steve Cooke (ix Personal Computer Games and formerly columnist for magazines ranging from Zap! 64 to Your Sinclair) and Pete Connor (ix Amstrad Action, Personal Computer Games and Your Computer reviewer) and you've got age and experience as well as youthful enthusiasm.

Every game on the following pages has been seen by all of us. We compare notes, express all faint opinions, and only then do we decide who's to take final responsibility for getting our views into print. What follows then isn't just a collection of casual comments, but the definitive ACE verdict on this month's software. We've checked it out – now you can too.

INDEX

● ADAPTED

- 64 DUNGEON MASTER Mirros
- 44 OIDS Mirrossoft
- 81 MAGNETRON Firebird
- 60 DRILLER PC version Incentive

● REVIEWED

- 52 ARKANOID 2 Imagine
- 64 BATTLE VALLEY Rockwell
- 67 BATTLESHIPS Fire
- 56 BLACK SHADOW CRL
- 67 BLOOD VALLEY Gremlin
- 67 CHAMPIONSHIP SPIRIT Electronic Dreams
- 63 DEMON STALKERS Electronic Arts
- 48 FERRARI FORMULA ONE Electronic Arts
- 67 FRIGHTWARE Cascade
- 64 GEE BEE AIR RALLY Activation
- 64 INTRIGUE Mirrossoft
- 50 MORPHEUS Raitaid
- 50 POWER AT SEA Acropole
- 59 PREDATOR Activation
- 46 ROCKFORD Mr. Mike House
- 56 SECONDS OUT Tapesoft
- 59 SIEGEARMS Go
- 52 SOKO-BAN Microsoft
- 56 STRIKE FLEET Electronic Arts
- 43 TIME FIGHTER CRL
- 60 VAMPIRES EMPIRE Gremlin/Magic Bytes

● AMSTRAD SOFTWARE

- 63 ALIEN SYNDROME Saggy

● UPDATES

- 48 AMSTRAD PC version
- 48 PLATOON Ocean
- 48 ATF Digital Integration
- 48 WARR
- 68 SLAP FIGHT Imagine
- 68 BMX SIMULATOR cjemasters
- 68 COMMODORE AMIGA
- 68 BMX SIMULATOR cjemasters
- 60 MERCENARY Novagen
- 68 COMMODORE 64
- 68 IKARI WARRIORS Fire
- 68 IBM PC
- 60 DRILLER Incentive
- 68 PIRATES Micropose
- 68 SPECTRUM
- 48 BLACK LAMP Firebird

DO you like driving headfirst down gun-steeked pot holes, blasting and shielding for all you're worth? Are you looking for tricky controls and tantalizing inertia? Do you want a cast-iron reason for running out and buying an ST right this minute? Then hold on tight - this game delivers.

The story so far: Those nasty Biocrete have enslaved the poor defenceless Oids, locking them away in lockers spread across the planes of five different galaxies. Your mission is to destroy the factories, rescue the Oids from the wreckage and ferry them to safety. The odds are stacked against you: heavy opposing fire, confusing teleport systems and gravity itself, pun on the pressure as you negotiate tight gaps to reach those Oids and get them back to your weeping mother ship.

Before you even reach all those narrow tunnels and blazing firefights, you'll have to learn your ship's controls. From the moment the mother ship drops you off, you're fighting planetary gravity; do nothing, and your ship will be smashed to pieces on the ground below. To stay aloft, you'll need to make quick turns on your engine the whole time, rolling left or right to direct the thrust sideways.

Mastering the problems of inertia and acceleration shouldn't take you too long here, but there's a nasty twist: Your weapons - both bullets and the more destructive bombs - are fired from the ship's nose, while your engines are mounted in the tail. In other words, you need to spend most of your thrusting time upright to stay airborne and most of your lining time nose-down to hit ground targets. Sinking the

right balance takes practice, though experience on the 8-bit classic Thrust will be an enormous help.

Needless to say, the game's no piece of cake once you've got combat flying sorted out. The Biocrete ground bases throw so much fire at you for one thing: Different types of installation fire bullets, explosive spheres or homing missiles, while the large volcano complexes can hurt all of these and launch lightless or killer satellites too. Other ground bases distort gravity so as to attract or repel your ship, giving even experienced pilots some serious control problems.

If you think gravity distorters are a problem when you're blasting Biocrete bases out in the open, you can't see nothing yet. In tiny underground caverns they make life all but impossible, grinding you against rock faces as you struggle desperately to stay in control. There's worse: To rescue the Oids, you've been you have to find a piece of flat ground and

969
ACE RATED

Atari ST Version

This very detailed guide to reach their peak with the perfectly animated Oids themselves, but are too heavy enough to let you concentrate on the game's unlimited action. If you're sick of all those glossy, disposable ST shoot-em-ups, get Oids - it's like a your rock on!

GRAPHICS	4	IQ FACTOR	7
AUDIO	2	FUN FACTOR	8

ACE RATING 969

PREDICTED INTEREST CURVE

Learn the ropes and you'll be playing it all year.

OIDS

MIRRORSOFT to the rescue!

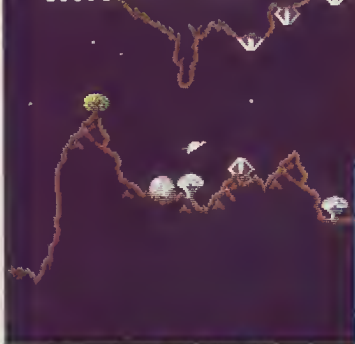
The construction set offers a small scale map of the game played, as seeking now.

Ref. A. If out there, it's like a passage ahead. This cube to navigate, and the tunnels can keep a bit.

Below, shadows of you, pretty in a burning power, with a volcano base.

After, three bombs get paid to the base's shields, and the ship blows!

After the ship blows, remaining a swarm of bullets and bubbles which wreck your ship.



This cavern is packed with hostile firepower, and these repulsors are trying to throw you into the next bad stuff.

RELEASE BOX

ATARI ST £19.99k

OUT NOW

No other versions planned

touch down on your last fine *Lunar Lander* style. This ticklish procedure can get murderously difficult or just plain impossible when attractors and repulsors get in on the act.

You've got a shield to protect yourself against fire or collisions, but it's manually operated – activate it too late and you're dead. The longer you keep your shield on the weaker it becomes, so protracted dogfights can burn it out completely. You can recharge it – manually again – but this runs your fuel down.

Shield technique is a tricky business and a

major source of lasting interest: using the shield stops the recharge for one thing, so you'll need to find a quiet spot if you've taken a lot of damage. You'll also need to find fuel dumps on the ground if you're recharging often.

Some wonderful set pieces and hellish crossfire zones make the game tremendously playable as is, but you're bound to work your way through the planetoids eventually. There's an enormous amount to do, sure enough, but the sheer intensity of addiction it generates will have you playing night and day. When the last planetoid of the last galaxy has fallen to your finely honed combat technique, what then? Why, design some galaxies of your own of course, using the built-in Odis construction set. A gutsy, brainy, fantastically obsessive shoot-'em-up with strategic depth and a planet editor – there's value for money for you!

• Andy Wilson

PROBLEMS, PROBLEMS

Comparisons with Firebird's *Thrust* spring to mind the moment you start playing Odis, even though its gameplay is a lot closer to Broderbund's older *Choplifter* – so it's worth noting some of the points that set the two apart. Aside from the fact that it's a much smaller game, *Thrust*'s higher gravity puts the emphasis heavily on control. The volume and variety of opposition makes Odis far more of a shoot 'em up, just look at the variety of unpleasant features the game can throw at you!



◀ **Regular** Attractors fire a single stream of power, but they're not very accurate.



▲ **Sphere Thrower** repulsors fire a stream of power, but they're not very accurate.



◀ **Attractor** repulsors draw you in, but they're not very accurate.



▲ **Alien Cruisers** fire a stream of power, but they're not very accurate.

▶ **Teleport** repulsors fire a stream of power, but they're not very accurate.



▼ **Missile Diver** repulsors fire a stream of power, but they're not very accurate.



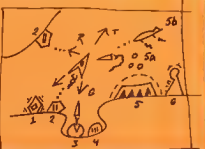
FOR EXAMPLE...

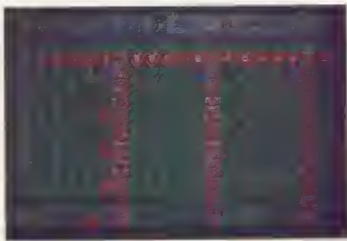
Here's an imaginary screen from Odis to show just how complex things can get. Though we've copied this one up for demo purposes, you often will find screens like this, or worse.

- 1 An attractor here to pull you in.
- 2 Our friends fire bullets at you.
- 3 A repulsor here to push you away.
- 4 A factory. Here are three Odis happen inside, but you're not doing enough to keep them?
- 5 A volcano here that's exploding spheres that and matches a lighter Odis to attract you. The Odis will not explode, so it's a good deal of shoot 'em up. Before you can't do the same deal.
- 6 A repulsor pushes you away.

FORCE DIAGRAM

- 1 Attraction force
- 2 Repulsion force
- 3 The thrust of your engine
- 4 Planetary gravity





ATARI ST — Of Rockford is masquerading as a medic in this world and is desperate to collect those palpitating hearts. Trouble is, most of them are safe behind walls. But if he were to dig a tunnel, turn on the fire up and see what happens when the two meet, he might just have some success with his demolition work.

ROCKFORD

MELBOURNE HOUSE dig for treasure

ORIGINAL games will always spawn sequels and clones. Rockford is the latest in a long line of games who owe their existence to the great Boulderdash. And just to prove its pedigree, the puzzles have been designed with the aid of Peter Lajpa — who started the whole thing off in the first place. Rockford himself is, of course, the cute foot-tapping critter who starred in the original.

Despite Peter Lajpa's involvement, however, Rockford is curiously unexciting. There are five different game 'worlds', in each of which Rockford plays a different character

Each world has 16 difficulty levels giving you 80 screens in all.

The recipe is as before: push around the rocks or other obstacles, avoid monsters, gather the treasures and then make it out of the exit before the time limit expires.

Depending on Rockford's character, the obstacles and treasures will change. On the Cowboy world, you have to avoid the

twirling pistols and collect gold coins as the Cook you must gather apples, and so on.

The puzzles are tough, but don't seem quite so headachy as in other games of that ilk, and the graphics and animation are excellent. But we've just seen too much of this stuff to get excited.

● Pete Corbin

IBM PC Version

Very well implemented indeed. Rockford fairly races round the screen, while the scrolling is nice and smooth. Why, though, is there no option to redefining the keys? The default is the cursor plus space bar and it's not very pleasant. There is a joystick option but it's IBM only.

GRAPHICS 9 **IQ FACTOR** 9
AUDIO 8 **FUN FACTOR** 8
ACE RATING 832

RELEASE BOX

ATARI ST	£19.95	OUT NOW
IBM PC	£19.95	OUT NOW
AMIGA	£19.95	IMMINENT
SPEC	£2.95	OUT NOW
C64/128	£2.95	OUT NOW

Spectrum Version

Developed with the incredible processing power of the Amiga it may well be, but it still looks like a Spectrum game. Graphics are fine and all the screens are there as on other versions. The problem — as with Boulderdash — is the scrolling: the Spectrum just can't handle it very well. If you don't mind the jeriness, though, it's a good value at £2.99.

GRAPHICS 6 **IQ FACTOR** 9
AUDIO 7 **FUN FACTOR** 7
ACE RATING 720

C64 Version

Graphics are just a wee bit fuzzy on this version, so that Rockford himself isn't all that clear. It has many games while the treasures you collect are also a little indistinct. The sound is an audio equivalent of the graphics. But it plays well enough.

GRAPHICS 6 **IQ FACTOR** 9
AUDIO 6 **FUN FACTOR** 7
ACE RATING 720

Atari ST Version

Very pretty graphics and nice sound. It's a very sophisticated piece of work — but you'll need to be a real fan to get it if you already have say, Skulltagery.

GRAPHICS 8 **IQ FACTOR** 9
AUDIO 8 **FUN FACTOR** 7
ACE RATING 758

PREDICTED INTEREST CURVE



C64 — Here's Rocky as rockin' roller cowboy, desperate to collect shiny gold balloons. But those platelets whirling around can cause problems. Should he bottle it and go hot hot, or is there a more civilised method?

FERRARI FORMULA ONE

ELECTRONIC ARTS put the pedal to the metal

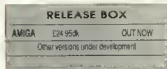
EVERY yuppie dreams of owning a Ferrari Testarossa (once the essential personal organizer has been purchased) but the sort of hardware you get to drive in the simulation is another matter altogether.

Formula One racing is the name of the game, with the player firmly in the driving seat. Participating in races is the main attraction, but there are other things that need

driver's-eye view of each race track, complete with cockpit interior and wing mirrors. As soon as you've got used to the controls—including how to brake and accelerate through corners without panning a cropper or losing large amounts of speed—it's time to enter the 1986 Grand Prix.

The game is structured so that the majority of events are subject to time constraints, as they would be in real life. For example, if it takes 45 minutes to fit a new engine into a real formula three, then it will take 45 minutes game time (about two in real time), so it's no use blowing your engine in warm-up 20 minutes before the flag drops as you just won't have enough time to swap. The only thing that is not affected by any sort of time structuring are the fights to and from successive race meetings.

Once the player has arrived at the race track, it's straight into the first of the two pre-race sessions. During these sessions the player



attending to the car's engine and aerodynamics have to be tested (thoroughly) at Ferrari headquarters in Fiorano (pron. Fee-Oh-Ran-Oh), then the player also has to decide



The wind tunnel at Ferrari HQ in Fiorano. Altering the angle of attack of the car's wings can seriously affect the car's handling properties.

the two qualifying sessions. Success here helps determine the player's starting position on the grid.

Each Grand Prix takes place over a distance of up to 300 kilometers (or 2 hrs real-time game playing, whichever comes first) and with a total of 16 to contest it will take you a long time to win your first season. Ferrari Formula One is a superb racing game that will thrill fans of this genre.

● Andy Smith



Better, rather: Last year's months of preparation have not been in vain.

how to angle the wings, how rigid to have the front and rear suspension, what gear ratio to use and so on.

Once the player has decided how to set up his car, the next step is to test it. You get a

can familiarise himself with the course and alter the settings to his car depending on the weather conditions. After practice and once all the necessary changes have been made to the car, the player moves onto the first of

Amiga Version

The perspective used throughout the game is very realistic—you really do get the impression that you're careening around the circuit with about 200km between the barriers and the seat of your pants. Sound effects, too, are very good and help to make the compelling and extremely playable game worthy of shelf space in any race fan's library.

GRAPHICS 8 10 FACTOR 4
AUDIO 7 FUN FACTOR 9
ACE RATING 856

PREDICTED INTEREST CURVE



Gripping stuff with plenty of testing interest.

RETURN TO

GENESIS

The Year 4224... Mechanoids have invaded

Your mission is clear, your senses tuned ready to take control of your supra-fighter. Your task to rescue Earth's most brilliant scientific minds from a life of fear and slavery.

Feel the adrenaline flow as you fly your craft at astonishing speeds over, under, through and into a continually scrolling scenery of brilliantly detailed landscapes.

Feel the pace, revel in the rousing sound effects as you streak forward in your mission to Return to Genesis.

Atari-ST disc £19.95

Amiga disc £19.95

Please order please enter your name and address on the order form available to British Telecom plc or direct debit from Access Ltd. by using card number and expiry date) to: The Marketing Department, Telecom Soft, First Floor 64, 100 Newmarket Street, London WC1N 1PS.



Atari-ST screen shots.

FIREBIRD



A LEGEND IN GAMES SOFTWARE



Telecom Soft, First Floor, 64-76 Newmarket Street, London WC1N 1PS.
© 1989 Telecom Soft. All rights reserved. All trademarks are the property of their respective owners.

NEVER mind the legal wrangles surrounding *Morpheus* - what's the game like? Initially it's confusing, but it soon becomes apparent that this game has a lot more depth of gameplay than yer average arcade shoot-'em up.

Broadly speaking, you're in charge of a large spaceship in which you attempt to destroy an entity - the nucleus - which is located at the centre of each of the 50 game levels. You have to destroy the nucleus indirectly by first destroying a number of charge orbits which are scattered throughout the level. The function of charge orbits and nucleus is (apparently) to maintain the positive and negative charges of the two equal

MORPHEUS

Conquer the universe with RAINBIRD

but opposite areas of space that together make up the universe - all clear now?

To hinder you in your quest to destroy the magnificent *Morpheus* who resides on level 50 are a number of small aliens known collectively as *Morphs*. These critters tend to react aggressively towards your craft and will line it up, take too many hits and your ship starts to lose energy, lose too much energy and it's game over. To aid your chances of survival, the game has a complex gun-chasing system - points you score on a level are turned into *Guineas* with which you can buy extra weapons etc. This is where the game really comes into its own - the Mar-

phal learn how to survive your attacks so you constantly have to upgrade your weapons system in order to beat them.

There's a large enough task in *Morpheus* to keep the player busy for some time, but the repetitive nature of the task could see your interest dying sooner than it might have.

• Andy Smith

RELEASE BOX

C64 126 £14.95s £17.95s OUT NOW

No other versions planned



Blasting away at the nucleus before you've destroyed the set number of charge orbits is suicide.

POWER AT SEA

ACCOLADE tread water



OCTOBER 1944 is the time, and the Leyte Gulf (in the Philippines) is the place. The player commands a fleet of three American ships of different classes and has to destroy four Japanese land bases. Shooting down Kamikaze planes and bombing the enemy ships and bases is very rem-

iniscent of the old *Beachhead* type of game. Simple fun with nothing much to keep you interested for long.

• Andy Smith

RELEASE BOX

C64 128 £9.95s £14.95s OUT NOW

No other versions planned



VAMPIRE'S EMPIRE

MAGIC BYTES grab the garlic

GARLIC tlinging Dr Van Helsing (who looks nothing like Peter Cushing) is the star of this very

pretty Amiga arcade package. Guide the light beam through Count Dracula's garden, cluttered by placing and changing obstacles. Awkward control of the main character doesn't help to improve the poor gameplay, and *Vampire's Empire* has ended up looking like something of a missed opportunity.

• Andy Smith

RELEASE BOX

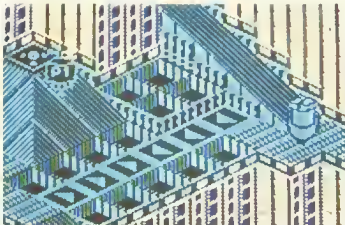
AMIGA £19.95s OUT NOW
ATARI ST £19.95s INDEVELOP
SPEC £19.95s £12.95s INDEVELOP
C64 128 £9.95s £12.95s INDEVELOP
AMS £19.95s £14.95s INDEVELOP



LAWYERS may end up making more money off it than programmers or software houses do, but this one's got to be a nice little earner for someone. Programmed by Steve Turner, this 3D droid-ets-ups got all the playability of Turner/Skybrook classics like *Paradroid* or *Raxxana*, and it's every bit as addictive too.

The plot's simple enough: eight enemy missiles are endangering Earth's spacefleet, so you've got to disable them by shutting their nuclear reactors down. As game tasks go, this one's no picnic, given that each satellite has four reactors and a wide range of very unpleasant defense droids. You start the game with a decidedly weedy KLP-2 droid, so you're clearly in for a tough old time at it. In fact, you won't survive very long at all unless you can beat yourself up a bit.

Self-improvement's something the KLP-2's very good at, mind you. Just switch its grappling device on, ram an enemy droid, hack through the blighter's security system and



You're in a P3 class pursuit robot, but that still leaves you out-gunned by the P1 guarding that reactor plate.

MAGNETRON

Can FIREBIRD spare the rod?

you can cannibalise it for spare parts. These form a new improved droid with better weaponry, defences or power systems, depending on the type of droid you grabbed—and you've still got the KLP-2 to fall back on if the new model gets destroyed.

Grappling's not the push-over it might sound like, however, thanks to the all-important enemy security system. This nasty little anti-tamper set-up takes the form of a sliding block puzzle linked to a self-destruct device. Solve the puzzle completely within a given time limit and you get your brand new droid; get only the bottom row right and you recharge your current droid's energy banks; but fail to do even that and the enemy droid explodes taking you with it.

Droids come in different categories from zero (strongest) to eight (weakest). KLP-2's on eight and the time limit for the puzzle depends on the relative strengths of your own droid and your target; attack a strong droid with a weak one and you'll have very little time indeed.

Once you've mastered grappling you're ready for the game proper with its exploration, combat and reactor-bashing. The game area's 100-plus isometric 3D screens have ramps, ledges and drops rather in the Marble Madness style, plus teleporters and those all-important reactors. Though you can't kill off a screen entirely you can easily fall from one ledge to another, taking damage in the process. In places magnetic floors and steep slopes threaten to send you over the edge. At first these present few problems, but as you start disabling reactors your

droid becomes harder to handle, with weight and magnetism both affecting you far more.

It's the rods that are the problem: you see each reactor's got four rods, and each rod's got a positive or negative charge. The total charge across the four rods determines the reactor's status: swap rods between reactors and you can send the charge too far one way or the other, shutting the power off. Unfortunately rods are heavy things, so carrying them up slopes can be a problem. What's more, the charge on the rod you're holding alters the action of magnets on your droid: the higher the charge the stronger the pull.

Once you've cleaned out a satellite you can teleport to another one and continue your reactor-side. With only 32 reactors to do the game's not going to be impossible to finish, but as the difficulty steps up you'll soon see just how tough the task is. Nicely paced and very challenging with great in-game information displays and varying droid abilities to add depth, this one manages to be enormously compulsive despite being made up of some pretty standard game components.

—Andy Wilton

904
ACE RATED

RELEASE BOX

SPEC	E7 95cs	OUT NOW
C64-128	E2 95cs, E12 95dk	IMMINENT
No other versions planned		



Having successfully grappled the P1—you're P1 class now!—you've accessed the reactor. Pull that A rod out and the time will click to 45, overloading the reactor.

Spectrum Version

Controls aren't quite as responsive as they might be, and there's the odd bit of colour clash too, but by and large it's a good looking stuff—and horribly playable too!

GRAPHICS 7 IQ FACTOR 7
AUDIO 2 FUN FACTOR 6
ACE RATING 904

PREDICTED INTEREST CURVE



Screamingly addictive, but you'll solve it eventually.

ARKANOID 2

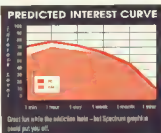
Balls bounce back from IMAGINE

BOUNCING balls can still make addictive computer fun, as *Arkanoid 2 - The Revenge of Dooh* proves. The Breakout super-clone has now cloned itself to produce a game which won't astonish you with its originality, but will certainly keep you at the keyboard for lengthy periods.

The game just in case you didn't know involves bouncing a ball off your bat to break through walls of bricks at the top of the screen. These bricks are arranged in various handish ways (33 different ones) making them pretty tricky to destroy. Individual bricks may require several hits to destroy, while others are indestructible.



AMSTRAD - These regenerating balls on the go, but it's still going to be a tough screen.



Spectrum Version

There's a problem with the background on the old *Specty* on lower levels. It's a similar colour to the ball, making it more difficult than it should be to distinguish between the two. Audio from that there's little to complain of: addition is the order of the day.

GRAPHICS 4 IQ FACTOR 4
AUDIO 5 FUN FACTOR 7
ACE RATING 671

To help you various tokens will flutter down towards you as you hit certain bricks you might get laser fire - an expanding 'ghost'

RELEASE BOX

SPEC	£7.95cs	OUT NOW
AMS	£9.95cs £14.95dk	OUT NOW
C64/128	£8.95cs £12.95dk	IMMINENT
ATARI ST	£19.95dk	IMMINENT
IBM PC	£19.95dk	IMMINENT

bat or multiple balls. A welcome addition to the powers in *Arkanoid* are the red balls which burn through everything on screen, and the regenerating balls which come back even if you let them go off the bottom.

The basic idea is exactly the same as the first version of the game - but that's not going to put you off if you like this kind of thing. It's all put together pretty well and remains infuriatingly addictive.

• Pete Connor

Amstrad Version

Very pleasant to look at, with extremely slick graphics and pretty colours. Control can be a little odd, you won't find the joystick much use, but the keys need to be pressed in a jerky manner to get to the right place. Furthermore, the ball sometimes seems to travel much more slowly than the ball which can lead to great fury and anguish. But that's why you play isn't it?

GRAPHICS 8 IQ FACTOR 4
AUDIO 6 FUN FACTOR 8
ACE RATING 749

SOKO-BAN

Not-so-golden oldie from MIRRORSOFT.

SOKO-BAN gives you 50 pre-designed single-screen mazes (and the ability to design almost 50 more). Each contains a number of crates scattered apparently at random throughout the alleyways and an equal number of designated crate-storage-spots. Your task is simple - push the crates one square at a time round the maze until they sit upon the spots.

On maze number one this is pretty simple, but by maze eight things are getting distinctly tricky. The problem is that you can only push ONE crate at a time - two together are just too heavy to shift. At best, you'll be

C64 Version

Graphics and sound are very poor. Frequent disk access is frustrating and extremely slow.

GRAPHICS 3 IQ FACTOR 9
AUDIO 1 FUN FACTOR 7
ACE RATING 487

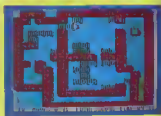
able to dislodge them from different angles - at worst, they'll block off an exit or become immovably lodged against a wall.

You can access any screen of *Soko-Ban* without passwords so if you really want to discourage yourself, you can take a peek at any screen 42. Anyone who thinks they're going to work that one out in less than a day should be lecturing at Imperial College.

IBM Version

Very similar to C64 version, but disk access is no longer such a problem.

GRAPHICS 4 IQ FACTOR 9
AUDIO 2 FUN FACTOR 7
ACE RATING 546



Getting these crates onto the elements isn't going to be as easy as it looks. And this is only screen number 18!

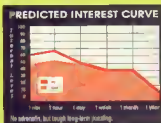
RELEASE BOX

C64/128	£12.95dk	OUT NOW
IBM PC	£19.95dk	OUT NOW

Scoring is based on time taken, together with number of moves and crates 'hoisted'. There's a 'competition' mode for up to four players to compete simultaneously.

Originally released three years ago on Japanese MSX cartridge, it's a bit of a shock to see this one in 1988. The simplicity of the game idea has stood the test of time, but the presentation, sadly, hasn't. What's more, other games (*Bonescruncher*, for example) have managed to combine challenging simplicity with more varied gameplay.

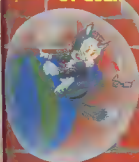
• Steve Cooke



ROAD CAT



"The graphics used are of a high standard, the events original and the sound is superb." ST USER



To Beyer 1984 and Los Angeles prepares for the Olympic Summer Games. The dignitaries and celebrities prepare their speeches, and await the huge crowds expected to attend. Beware there are still the straying city-dweller cats roamed by all. The infamous cats are well known for they are playing their own competitive games. Will Bad Cat live up to his name?

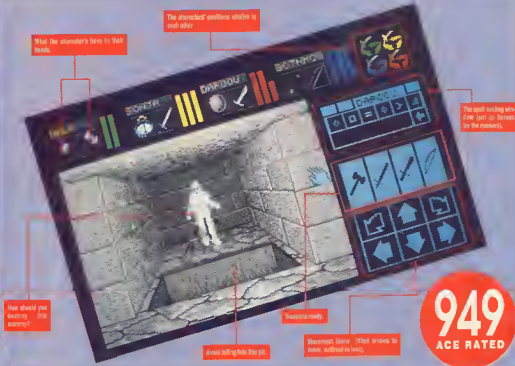
PC - 24.99d
 AMIGA - 24.99d
 MS-DOS - 9.99d
 ATARI ST - 19.99d

TOMORROW'S SOFTWARE TODAY

GO!

625 Midland Nottingham Ltd. Units 202, Midland Way, Nottingham NG1 7PA, TEL: 053 256 2300

Rainbow Arts



Once you've got a fair way into the game you'll come across some pretty ferocious purple worms that can reduce your battle hand speed limit to so many bones in a short space of time. The way to defeat these monsters is to find yourself a metal doorway (one you can operate with a button on a wall) and lure the worms towards it. Stand on the other side of the doorway and keep it closed, ensure you have plenty of anti-poison potions ready and put your best fighters at the front. Poison yourself as close to the door as possible and ease it. As soon as the worms enter, hit the door button to close it and get your fighters going. You'll notice the doorway banging up and down on the worms (causing them damage) and after a while the worms will retreat. Recover your strength, anti-poison anyone who's been bitten and repeat the process. Sooner or later the worms will be defeated.



MIRRORSOFT's fantastic quest

You take the part of Theron, an apprentice wizard who's out to rescue his master's Firestaff from the Dungeons of Lord Chaos. How your master came to lose his staff (and end up having his soul split in two) is the sub-

Twenty four adventures have already attempted to recover the Firestaff all failed. As Theon you now have the chance to succeed up to four of these adventures to accompany you. Your choice of character is influenced by their particular attributes and you'll need a fair mix of skills within your party if you wish to survive. Fighters will be needed to deal with the various monsters, wizards will be needed to create and cast spells to deal with really tough monsters and priests will need to be on hand should any one become injured.

VITAL STATISTICS

As with all role-playing games the characters in *Dungeon Master* develop during play, their abilities improving with practice. A character's current ability levels can be examined by selecting the status screen and clicking the pointer on the eye icon. The rest of the status screen shows which particular character you've selected (Halk in this case), what they're carrying and their food and water levels. The top right of the screen shows the positions of the adventurers as they move through the dungeon. Halk and Sonja are at the front at the moment but the player can alter the line-up whenever he feels like it, matching the abilities of his leader with the most immediate challenges.



Atari ST Version

The graphics, though largely repetitive, are wonderfully drawn and coloured. Sound is sparse but the effects are great. A thrilling game with plenty in it to keep you searching, fighting and puzzling for a long time.

GRAPHICS 9 IQ FACTOR 7
AUDIO 6 FUN FACTOR 9
ACE RATING 949

PREDICTED INTEREST CURVE



You'll play this 'til you get completely sick—or you finish it. Either way, you'll play for a long time to come.

RELEASE BOX

ATARI ST £24.95k CUT NOW
No other versions planned

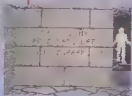
The game is viewed through a large window taking up most of the screen, with icons across the top of the screen relating to each individual's health, stamina, magic levels and whatever equipment they happen to be carrying in their hands. Food, water and other equipment found throughout the dungeon is carried in an individual's backpack.

Lord Chaos has not only filled his dun-

The Worm's Turn...



1. Walking through the Dungeon, there's a mystery up ahead, but he seems to be blocked by a pit. What's that writing on the wall?



2. Curseword and curseword!



3. Well, he's standing on a panel that might open a secret doorway, or it might close the pit if you can destroy him without hurting anything heavy on the panel. Getherg's got a bow and arrow, that's the trick.



4. A secret passage has been opened! Now how to get to it? And what are those purple blingy-bobs?



5. One step to the right, and an invisible warning has suddenly appeared on the wall. Or hasn't?

6. That mystery net only opened a doorway. It released some particularly vicious nasties that can release a warning if you play it wrong. Give me Halk on his way to join her. It might just be time to re-load and try another approach.



geon with a variety of hideous monsters, he also throws in some tricky puzzles that need solving before you can progress. These puzzles are of various kinds, some are simple logic puzzles whilst others take the form of riddles. Still more rely completely on the timing of your moves across a particular area.

No fantasy adventure would be complete without a smattering of magic and *Dungeon Master* has it's fair share. You won't have to worry about collecting eyes of newts or wings of bats though, because the ability to cast a spell is only dependent upon a character's magic level. For example, Gol-

th's magic level is 100, which means he can let loose with some pretty powerful spells - fireballs for example, or magic storms, potions which can come in very handy during a tough fight. Halk on the other hand has no spell power so he's never able to learn and cast spells.

Dungeon Master is a wonderful game that will puzzle and entertain you for a long time - with 14 levels to the game, it's doubtful you'll finish it in one sitting. Thank heavens then for that save game option.

• Andy Smith

TASTE has never been the American strong point, but some might find the Falklands War scenarios in this conflict simulation from across the Pond a little more than badly judged. The Falklands War was only six years ago after all and touched the lives of more than just a few of our population.

Still, not all of the ten scenarios found in *Strike Fleet* are based in the South Atlantic—some are set in the volatile Persian Gulf and others involve battling up the Soviet fleet in the Norwegian Sea.

The player takes charge of the whole fleet during any particular scenario: the

STRIKE FLEET

ELECTRONIC ARTS pipe you aboard

RELEASE BOX

C64/128 £14.95K OUT NOW
No other versions planned

number of ships and helicopters available to you varies depending on which scenario you happen to be playing. Objectives include sinking a certain number of subs within a time limit (this is one of the scenarios set around the Falkland Islands) protecting innocent tankers for a specified time etc. Suc-



The shipyard screen: Here's where you decide the number and class of ships in your task force.

C64 Version

Nice graphics and sound makes for an enjoyable game. You'll need to apply a fair amount of tactical and strategic thinking if you wish to gain that exalted rank of Fleet Admiral. But it's not all a mental exercise—there's enough action to keep you busy too.

GRAPHICS 7 **IQ FACTOR** 4
AUDIO 4 **FUN FACTOR** 7

ACE RATING 707

cess can mean promotion through the ranks to Fleet Admiral, whereas failure can result in a court martial.

There's plenty to keep the player occupied in the game though: most will bless the games' speed time-up function, when things are quiet. *Strike Fleet* is a well put together and involving game that will keep you busy for quite some time—that's if you can stand the politics.

Andy Smith

PREDICTED INTEREST CURVE

Complex and engaging enough to keep you interested for a while.

BLACK SHADOW

Asteroid action from CRL

CRUISE A monster asteroid is threatening to put the Earth into a permanent eclipse. It's up to you (and a friend if you wish) to stop it by flying across the vertically-scrolling landscape and destroying the military bases, industrial units and some hyper-reactor. *Black Shadow* is very

pretty murderously difficult and extremely playable, but it's just another shoot-em-up with no outstanding features.

Andy Smith



RELEASE BOX

AMIGA £19.95K OUT NOW
No other versions planned

PREDICTED INTEREST CURVE

ACE RATING 701

SECONDS OUT

Get punch-drunk with TYNESOF



THE Marquis of Queensbury would turn in his grave if he knew Mike Hammerhead Hagler was letting loose with

headbutts in the ring. It doesn't seem to worry Tynesoft, however, and why should it when your man in the ring is transparent? You've got five opponents to fight—each slightly tougher than the last on the road to the championship title. Good fun, but don't expect it to go the distance.

Andy Smith

RELEASE BOX

ATARI ST £19.95K OUT NOW
AMIGA £19.95K IMMINENT
No other versions planned

PREDICTED INTEREST CURVE

ACE RATING 582

DREADNOUGHT

VE

Doesn't
achieve
to your
women?
nts to
or than
to the
fun but
he dis-

ay Smith

CURVE

2



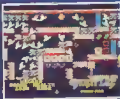
Setting New Standards
IN COMPUTER SOFTWARE

London EC2A 4BJ Telephone 01-377 8411 Telefax 01-377 5569

MAY THE FORCE GO WITH YOU!

You'll need it!! The reflexes and powers of a mere mortal will not be enough if you accept the challenge of these four chart topping arcade conversions, together for the first time in one package.

GAUNTLET™
& THE DEEPER
DUNGEONS MAPS.



A C&VG hit. They said "Great graphics, good sound, perfect playability - what more could you ask for?" The best selling game of 1986 - a UK No. 1 and the Gallup charts for 48 weeks.

ATARI
GAMES

ATARI
GAMES



ROAD RUNNER™
A C & VG game of the month "One of the best conversions I have ever played." A UK No. 1 and in the Gallup charts for 20 weeks.

ATARI
GAMES



INDIANA JONES™
ST User said "A cracking arcade game, good sound and graphics combined with hot action". A UK No. 1 and in the Gallup charts 18 weeks.

ARCADE FORCE FOUR

FOUR INCREDIBLE
ARCADE CONVERSIONS

METRO CROSS™

Crash Magazine said "As Coin-op conversions go this is a real winner".
A UK smash hit.



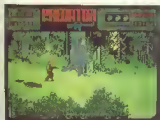
namco

**CBM 64/128 Cassette £9.99 Disk £14.99 Amstrad Cassette £9.99 Disk £19.99
Spectrum 48/128K Cassette £9.99 Atari ST Disk £24.99**

U.S. Gold Ltd., Units 2/3 Holford Way, Holford, Birmingham B6 7AX. Tel: 021 356 3388.

ARNIE Schwarzenegger fans will jump for joy at the very idea of this one—a strip of sideways-scrolling punge a whole bunch of rebels and a wide range of weapons to kill 'em with—but the game does leave something to be desired.

The idea's simple: run along a strip of bush shooting bad guys and wild animals dodging hostile fire and collecting weapons. The only complication—the alien hunter who's been killing your men off—intrudes as



GO!—You're out of ammo. Time to grab your dear buddy a gun. And get on with the action.

RELEASE BOX

C64-128	£9.95cs, £14.95dk	OUT NOW
AMS	£9.95cs, £14.95dk	OUT NOW
SPEC	£9.95cs	IMMINENT
ATARI ST	£14.95dk	IMMINENT

PREDATOR

ACTIVISION go wild in the jungle!

a gun-sight tracking across the screen after you. You'll lose a life if this series is successfully, but outunning it is rarely a problem.

The weapons available to you might look different, but they tend to be remarkably similar in performance. Ammo for each is limited, so use it sparingly. The bird is that with the weight of opposition you face from

rebels and (what look like) fruit bats you can't shoot everything that attacks you. You could try punching, but that won't get you much further than if you just keep running.

So you are bound to take hits. Six hits cost you a life and losing three lives costs you the game, so it's just a question of how far you can get before the thing grinds you down. This would get dull enough even without the game's poorly implemented multi-load, or on tape versions the overall game experience is a far less watching point d'ary.

• Andy Wilson

Amstrad Version

Ridiculous graphic glitches and 5mph bullets spoil any visual impression the sluggish scroller might have made.

GRAPHICS	4	IQ FACTOR	1
AUDIO	3	FUN FACTOR	3
ACE RATING 410			

C64 Version

A non-parallax scroll makes this quite palatable stuff but not exactly interesting.

GRAPHICS	7	IQ FACTOR	1
AUDIO	3	FUN FACTOR	6
ACE RATING 606			

PREDICTED INTEREST CURVE



Even the better, better-looking C64 version gets dull after a while.

SIDE ARMS

GO! shoot some aliens—again

ALIEN tyrants seem to play an important part in game scenarios and the latest to threaten the Earth takes the name of Baron. Thankfully there's usually a hero for the player to control in an attempt to thwart the tyrant's plans.

Step in Lieutenant Henry and Sergeant Sanders (that's you folks) for this one (C64 has two-player option) plays host that will bring you face to face with The Mobile Armoured Sentipet Baron's secret weapon. AS seems to be the norm of life with this style of game, there are numerous extra weapons to pick up. Destroy a wave of aliens, pick up the symbol that appears on-screen and you'll gain a benefit. Shooting the symbol sends it cycling through a range of benefits to choose from—extra speed, 3-way shots or a Mega Bazooka Launcher etc. You can then start to think about going for the extra points gained from shooting various non-aggressive ani-



SPECTRUM—holding away at the start of level two. You have to play solo on the Spacey.

mals and fruit that appear occasionally.

While the game can be fun for a short while, there's nothing in it to make you come back for more. Disappointingly simple stuff that doesn't have any new features to keep the player interested for very long.

• Andy Smith

RELEASE BOX

C64-128	£9.95cs, £11.95dk	OUT NOW
SPEC	£8.95cs	OUT NOW
AMS	£9.95cs, £14.95dk	IMMINENT
ST version planned		

Spectrum Version

Colourful graphics can't gloss over the poor game play and collision detection problems. End of level questions make their appearance here but even they are there to keep you interested for long.

GRAPHICS	6	IQ FACTOR	1
AUDIO	3	FUN FACTOR	4
ACE RATING 493			

C64 Version

The best of the bunch simply because it has a simultaneous two-player option. This makes the game more enjoyable and therefore likely to keep you interested for longer. You pay for this extra option in the C64 version though with multi-load.

GRAPHICS	7	IQ FACTOR	1
AUDIO	4	FUN FACTOR	6
ACE RATING 594			

PREDICTED INTEREST CURVE



The C64's simultaneous two-player option lessens the game's longevity—but only slightly.

DRILLER

IBM PC • Incentive £19.95

It's gas build-up time on Mithal again folks, and we're not talking about indignation either. The noxious vapours produced by dodgy mining techniques have risen in pressure to the point where they could blow the whole place apart, so you'd better start placing your drilling rigs pretty fast, hadn't you?

On the 8-bit scene this one made quite a splash, and no wonder - the solid 3D good looks and real world feel to the game made it both original and impressive. Now on the PC it's got a special something extra: speed. It's fast! On an 8MHz CGA PC like the

IBM PC Version

The best Drill yet and a fine game by anyone's standards: the game looks great, moves well and is a joy to explore.

GRAPHICS 9 IQ FACTOR 8
AUDIO 3 FUN FACTOR 8
ACE RATING 962



PC1540 - Drilling around in your exceptional probe, you please to look up at the arch above you.



PC1540 - Flying the spatter plate now, you dare to look at a good energy crystal - but watch out for that gun-turret by the door.

Amstrad PC1512 it moves three times as fast as the 8-bit versions, and that's a phenomenal difference.

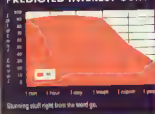
The game itself hasn't changed - there's still the same mix of tricky puzzling and frantic blasting - but with so much extra speed

the latter is nicely hotted up. The overall feel is of an action game with adventure components rather than vice versa, and that's probably going to make the game a whole lot more popular - not that it was doing any too badly as it was.

A start-of-game menu allows you to use Amstrad or IBM joystick instead of the main keyboard controls, while the choice of CGA or EGA versions will let colour 1640 owners play the best-looking Driller yet (Mono 1640 owners please note, there's no Hercules option so you're out in the cold yet again). Ambitious stuff that succeeds admirably: this would be a worthy addition to any serious gamer's collection.

Andy Wilson

PREDICTED INTEREST CURVE



MERCENARY

AMIGA • Novagen £24.95

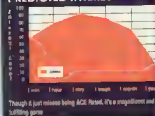
When *Mercenary* first appeared on 8-bit formats it immediately achieved cult status and created quite a stir amongst gamers. You either loved the game and played it for months on end, or you hated it and couldn't play it for more than 10 minutes without getting bored stupid.

Whichever faction you happen to belong to doesn't alter the fact that the game has real depth. Your task is simply to escape the war-torn planet of Targ on which you've crash landed. But achieving that will take you a long time. Your own spaceship's a write-off, so the whole game revolves around trying to acquire a new craft in which you can achieve escape velocity and head off home. The planet's two main inhabitants - Palyars and Mechanoids - are at war with

each other, and either side is willing to pay for your mercenary services. Should you choose to remain neutral, you could even try playing the races off against each other.

The game area is huge, and most of the action takes place overground in Targ's Central City, which has a equally large underground complex for you to explore. If you're looking for a game with a huge quest to

PREDICTED INTEREST CURVE



complete then look no further.

Andy Smith

Amiga Version

Despite the power of the Amiga, the game is still in its vector format. This is a little controversial - some will doubtless have wished the buildings and objects to be filled in while others would argue that this would remove most of the game's aesthetics. With the Second Guy included, this is a must for explorers and adventurers.

GRAPHICS 8 IQ FACTOR 6
AUDIO 6 FUN FACTOR 8
ACE RATING 894



You're inside one of Central City's hangars and you've found a land crab. Should you risk pinching it?

WIZARD WARZ

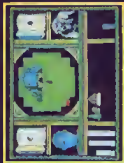
WIZARD WARZ is a combination of fast moving action, depth of game play and strategic challenge that takes fantasy role playing one step further and it's....

OUT NOW!!

Copyright © 1987, U.S. Gold Ltd.



Screenshots from Commodore 64 version.



Screenshots from Spectrum version.



Screenshots from Atari ST version.

CBM 64/128 £11.99 DISK £9.99 TAPE

AMSTRAD £14.99 DISK £9.99 TAPE

SPECTRUM 48/128K £8.99 TAPE ATARI ST £19.99 DISK

Go! Media Holdings Ltd., Units 2/3 Holford Way, Holford, Birmingham B6 7AX, Tel: 021 356 3386.

THE ARMAGEDDON MAN



The year is 2039 AD and the world is balanced on a knife edge between survival and destruction. The last thirty years have seen an enormous expansion of the world's nuclear arsenal. There are now 16 nuclear superpower nations, each with the capacity to trigger the final destruction of mankind - Armageddon!

In a world where trust is crippled by 'Uncertainty of Response' the 16 superpowers form a desperate alliance - the UNN (United Nuclear Nations).

Together they finance and build an enormous network of spy and laser defence satellites capable of monitoring, influencing and even directly controlling the political, economic and military events of the world.

Control of the network itself resides in an enormous and sophisticated satellite, codenamed Olympus - and control of Olympus resides in its Supreme Commander often called 'The Armageddon Man' who literally holds the fate of the world in his hands.

In this incredible new game scenario YOU have just been chosen to become the next 'Armageddon Man'. Whether you have the necessary diplomatic, military and tactical skills to avoid global devastation is something you, and the World, are just about to find out.

Each game comes complete with a comprehensive instruction booklet, a colour vinyl map of the World, 2039 Edition (25" x 16") and two sheets of vinyl re-usable flags to help plot the course of world events.

NEW

ENHANCED
VERSIONS AVAILABLE

Atari ST	Disc £19.99
Commodore Amiga	Disc £19.99
Amstrad PCW 8250/8512	Disc £19.99
IBM PC	Disc £19.99

Also available on

Spectrum 48/128	Cassette £19.99
Amstrad CPC	Disc £19.99
Commodore 64/128	Cassette £19.99
	Disc £19.99

martech

Martech is the registered trade mark of Martech Games Limited,
Martech House, Bay Terrace, Pevensey Bay, East Sussex BN24 4EE
PHONE (0323) 768456 TELEX: 878373 Martech G FAX: (0323) 764460

BATTLE VALLEY

RACK-IT go blasting



SCROLLING shoot-em-ups are not a thing of the past down in Battle Valley the action is blazing as ever, with tank and cyber in the thick of the battle.

The game pits you against a variety of land and air-based weapons installations all blasting away at you. Choosing either tank or chopper, you zoom

off sideways to settle their hash. Battle Valley's scrolling is excellently done; the action is fast and the sound effects effective. All in all it's a very good budget shoot-em-up.

● Pete Connor

RELEASE BOX		
CM 138	12 99c	OUT NOW
SPC	12 99c	IMMINENT
MS	12 99c	IMMINENT



ALIEN SYNDROME

Damp squib from SEGA

PACMAN was a very compulsive game. It still is. So are many other classic game ideas - RoboRaid, Defender, Galaxian say. But we don't expect to see these sorts of games being released in 1988 on a new console system. We certainly don't expect to pay \$24.95 for them.

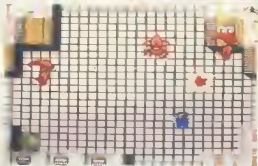
And that's the problem with Alien Syndrome. The overhead view the maling Gauntlet-style opposition, the blasting laser, the buddies to be rescued, the different levels, the end-of-level guardians - what's new?

Answer: nothing. Despite unimaginative graphics and poor sound it's still quite playable, but do you really want to fork out for this sort of

thing all over again? Probably not.

● Steve Cooke

RELEASE BOX		
SEGA	CM 150	OUT NOW



TIME FIGHTER

CRL don't know what time it is

FIGHTING your way through different time zones using the weapons of each epoch doesn't sound like a bad idea at all. And if you've got nicely animated characters, all the better.

Sadly Timefighter is a bit of a bachel. While the tiny figure you control is well animated, everything else about the game seems an awful lot to be desired. The plot is perfunctory

the backgrounds are dull, the sound effects execrable. To top it all, the gameplay is dreadful, by all.

● Pete Connor

RELEASE BOX		
CM 128	15 99c	OUT NOW
Sees & Amstar versions planned		



DEMON STALKERS

EA go clone arranging

CLONES just keep coming. This one's pretty Gauntlet-ish, offering 100 screens of mass action as you attempt to clear the Magic Vaults of the evil of Galvick.

Each of the many levels has, of course, its own swarm of monsters, stacks of treasure chests and bunch of keys. It's a question of getting the requisite keys to get through to the next level while fighting the monsters and eating and drinking enough to

keep your strength up.

An average example of this genre in all ways. Cassette owners beat in mind loading times.

● Pete Connor

RELEASE BOX		
CM 128	15 99c	OUT NOW
No other versions planned		



INTRIGUE

MIRRORSOFT join the fight against crime

CHEEZ Sant is dis yet convrter game about peepers?

It is indeed. Hoppy, another game featuring private eyes and The Sant's mouth snapped shut and his keen blue eyes suddenly narrowed in intense concentration.

Aha! he murmured as Hoppy grabbed a bottle of Jack Daniels. The display scrolls horizontally revealing the streets of Washington DC in glorious monochrome.

Glenk?? choked Hoppy in mid-gasp. Look boss - words.

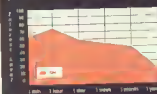
They are indeed words, fellow primate, or rather they are commands - though pitifully few of them. It seems we can ENTER (bustling) TALK TO WALK and SEARCH. You can also PHONE and HAIL CABS. The commands appear above the element of the

RELEASE BOX

C64/128 £12.99dk OUT NOW

No other versions planned

PREDICTED INTEREST CURVE



Atmospheric and original, but again it is on the easy level and User's not much incentive to try again.

display they refer to so I can ENTER that building for example. Inside we might well encounter the ungodly whereupon we select a speech option with the joystick and engage their image in limited conversation.

Wow! Getta load of dot fazing, crooned Hoppy thrown into a delighted trance by the animated lips of the waitress on screen.

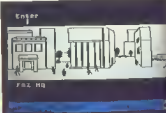
C64 Version

Yet another attempt to mix graphics action with sexual interaction. You get a pretty lady while you play, but the digitised graphics are poor and the exterior locations crudely depicted in black and white.

GRAPHICS 5 IQ FACTOR 7

AUDIO 7 FUN FACTOR 6

ACE RATING 671



Clicking the joystick button will lead to a new screen, showing the interior of FBI headquarters. As you can see, the graphics are largely lacking in detail and the only interest of the game seems to be TALKing to other characters - but they soon become repetitive.

That Hoppy is a digitised fazing. But I can't see no fingers, boss.

Probably because it's pretty poor quality, murmured the Sant under his breath. 'Worst of all about?' enquired Hoppy.

You must find these objects and the location of a hideout. In doing so you will locate your kidnapped brother and frustrate the ungodly in their attempt to release a cloud of deadly gas above this fair city.

Sounds a piece of cake to me, boss.

Yes, unfortunately it is, replied the Sant coolly. And there are pitifully few locations to visit. But there are three levels of play, some amusing conversation options and the locations of the objects change with each game.

Looks like a game for mugs, granted Hoppy, gazing sadly at his empty bottle.

'You should know', chorled the Sant.

Stewi Cooke (with apologies to Leslie Charteris)

GEE BEE AIR RALLY

ACTIVISION fly sky high

WANT it through air it will zip greater of ease. Goo Bee Air Rally puts you at the controls of a plane, a storming one of the American jets and lets you fly to the heart's content.

The game is a sequel to the Goo Bee 1, a game's title specifically designed to take in races on a desktop. You compete in a number of races, each with a different set of rules and a different set of opponents.



Design the silver planes, then down and use these buttons

...the game's controls. The Goo Bee 1 is a sequel to the Goo Bee 1, a game's title specifically designed to take in races on a desktop. You compete in a number of races, each with a different set of rules and a different set of opponents.

Amiga Version

Excellent graphics are the main attraction here. Each plane is clearly visible and it's very satisfying to overtake below or above. Sound effects do their stuff, and there's some pleasantly jazzy intro music.

GRAPHICS 8 IQ FACTOR 2

AUDIO 7 FUN FACTOR 7

ACE RATING 679

RELEASE BOX

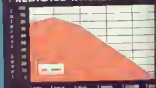
AMIGA £19.99dk OUT NOW

SPEC £7.99cs IMMINENT

C64/128 £9.99cs, £14.99dk IMMINENT

AMS £9.99cs, £14.99dk IMMINENT

PREDICTED INTEREST CURVE



Looks the long for a short time, but soon starts settling.

FREE

For a **FREE** startup write to:
JADE Games, **FREEPOST**, Southsea,
Hants, PO4 0BR
(no stamp required)

Discount
Software

122 MELROSE AVENUE
WIMBLEDON PARK
LONDON SW19

Discount
Software[illegible]

ST Public Domain software - send S.A.E for list!
if you don't see what you want give us a ring!
ALL PRICES INCLUDE VAT, POST & PACKING FOR UK MAINLAND

Make Cheques/PO's payable to
Storm Computers, S.A.E. For full list



**WITH NEW LOWER PRICES,
FREE PLASTIC LIBRARY CASES
AND FREE 1ST CLASS DELIVERY**

3-5" Blank Disks



FREE User Labels
FREE Top Quality
"SLIMPACK" Plastic
Library Case with
every 10 Disks

- ☒ FREE DELIVERY
- ☒ UNBEATABLE GUARANTEES
- ☒ SUPERIOR BACK-UP SERVICE

10	£11.00 inc. VAT = £12.65
50	£49.90 inc. VAT = £57.39
100	£93.00 inc. VAT = £106.95
10	£13.00 inc. VAT = £14.95
50	£59.90 inc. VAT = £69.89
100	£111.00 inc. VAT = £128.65

[illegible]

MD 70L - 3½" DISK STORAGE BOX

- Holds up to 70 Disks
- High Quality
- Impact Resistant Plastic
- Smoked Hinged Lockable Lid (2 Keys)
- Supplied with Dividers

Save your valuable
Disks from dust,
spilt drinks etc.

ONLY ...
£11-26
EX VAT
inc. VAT = £12.95



Computart

Dept STA Jubilee Drive
Loughborough - Leics. LE11 0XS
☎ 0509-610444

(Prices & Delivery Subject to Availability E & OE)

▶ GREAT DEAL MORE ▶▶▶

- HARDWARE GUARANTEE: If goods are faulty within 30 days of Purchase Customers will get the same SAME DAY REPLACEMENT or CASH REFUND.
- Buy 1 get 1 free. After 30 n

Computer FOR A GOOD DEAL LESS!
A GREAT DEAL MORE

SPECTRUM
CASS £7.95

COMMODORE
CASS £8.95

GUTZ



S.P.E.C.I.A.L.



ocean
NIGHTMARE

A DREAM COME TRUE!

YOU HAVE BEEN SWALLOWED! EATEN ALIVE BY AN EXTREMELY HUNGRY, TEN MILLION TONNE MEGA-BEING THE SIZE OF THE MOON, ON A JOURNEY TO EARTH FOR ITS MAIN COURSE!

NOW TRAPPED WITHIN THIS RAVENOUS MONSTER FIGHT ITS ANTI-BODIES TO GAIN ACCESS TO THE MAIN FUNCTIONS IN ORDER TO SHUT THEM DOWN - AND THAT'S NOT EASY! THEN BUILD A SPECIAL WEAPON, BREACH THE DEFENSIVE DOORS... JUST FOR STANKERS!

Ocean Software Limited • 6 Central Street • Manchester • M2 5NS • Telephone 061 832 6633 • Telex 649977 OCEANS G

FRIGHTMARE

CASCADE get traumatised

WHAT can you expect from a program endorsed by Grot Bags the Witch you might ask yourself - a boring old platform game full of timing problems? Well that's what you get here, aught plus a few other niggles as well. Collectable weapons, extra jumps and the like are all very well but half of them are practically useless while the other half are so vital you might as well give up if you waste one of them. The supposedly nightmarish graphics are really rather dull and the sprites sensuously lacking in colour, leaving the program as a whole somewhat below the standard you'd expect of a two-quid game.

RELEASE BOX			
C64/128	£3.95cc	£14.95cc	OUT NOW
SPEC	£3.95cc	£14.95cc	OUT NOW
AMS	£3.95cc	£14.95cc	INMAYMENT
IBM PC	£10.95cc		INMAYMENT



● Andy Wilson



BATTLESHIPS

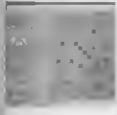
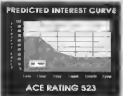
EUTE get all hands on deck

IT MIGHT be a heck of a lot cheaper to buy a pencil and some paper than it is to buy an Amiga and Eute's version of *Battleships*, but then you'd have to find a friend to play it with you. The macro version gives you a computer-controlled opponent so you won't have to worry on that score. *Computer Battleships* is a simple game that you'll

probably play for years to come - but never get too excited.

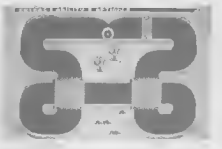
● Andy Smith

RELEASE BOX			
AMIGA	£19.95cc		OUT NOW
SPEC	Only on completion (Eute Collection)		
C64/128	Only on completion (Eute Collection)		
AMS	Only on completion (Eute Collection)		



CHAMPIONSHIP SPRINT

ELECTRIC DREAMS after course



CONSTRUCTION sets are great things to have around on most games so a re-designable *Super Sprint* must have looked like a good move for ED. As it turns out this one's not quite the hot property you might have expected. The track designer is nicely implemented but the range of track shapes available isn't too large - you can't even do the first standard *Super*

Sprint track properly - and in any case different tracks can only hold your attention for so long. What grappled about the original was the great control and driving action, but sadly this one just doesn't have that in the same way.

● Andy Wilson

RELEASE BOX			
C64/128	£3.95cc	£4.95cc	OUT NOW
SPEC	£3.95cc		OUT NOW
AMS	£3.95cc	£4.95cc	OUT NOW



BLOOD VALLEY

GREMLIN'S manhunt

TNIS one or two-player game is based on the *Duel Master* series of fighting fantasy books. The game is centred around a central plot of a man hunt and if you're playing solo you play the quarry. *Blood Valley* is an ambitious game that just doesn't deliver with an interesting game concept ruined by poor gameplay.

● Andy Smith



RELEASE BOX			
C64/128	£3.95cc	£14.95cc	OUT NOW
SPEC	£3.95cc	£14.95cc	OUT NOW
AMS	£3.95cc	£14.95cc	OUT NOW



Don't tell me - you've been green with envy over all those terrific games coming out for every machine under the sun except yours. Fret no more! Now Amstrad and C64 owners can unwrap their Mavericks as Digital Integration's *ATF* goes multi-format. Now Amiga owners can boil some monster skeletons down into bars of soap as *Bonecruncher* hits the 16-bit scene. And that isn't all...

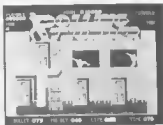
SPECTRUM

BLACK LAMP

Fielded \$7.95cs

ST version reviewed Issue 6 - ACE Rating 83

On the ST this one looked like an old Spectrum arcade adventure with great graphics and nifty animation given that it lost the graphics and the animation on the way over - this was never going to be a great conversion. It's sluggish, colourless and unengaging with a dull game task into the bargain - just steel your yolly little yester round the castle and towers, collecting lamps and zapping nasties. There's some terrific 128K music - really top notch stuff - but the meagre hits and poor control responses are simply too high a price to pay.



ROLLING THUNDER

US Gold \$19.95cs

Spectrum version reviewed Issue 6 - ACE Rating 715

Amstrad version reviewed Issue 6 - ACE Rating 890

Agent Albartross (that's you, folks) makes it onto the 16-bit machines in style. The plots the same, but the graphics have been substantially improved. Unfortunately the music and effects are dull. Gameplay is none too hot either, but it's reasonable fun to play and addictive in the short-term. But the most coin-op conversions your interest will wane sooner rather than later.

● ACE RATING 725

BMX SIMULATOR

Codemasters \$14.95cs

Almost identical to the Amiga version and so receives the same high rating.

● ACE RATING 810

AMSTRAD

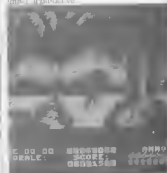
PLATOON

Ocean \$9.95cs £14.95cs

Spectrum version reviewed Issue 7 - ACE Rating 530

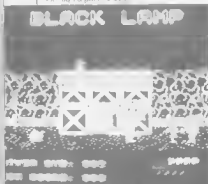
C64 version reviewed Issue 7 - ACE Rating 401

A worthwhile game on the C64, this one's rather less satisfactory on the CPC. The game format and sluggish controls mean that you're bound to take hits as you slog through the jungle and without the dropped supplies of the C64 version there's no way to undo the damage. The graphics tell some way short of *Gryzor* or *Renegade*, making the whole thing rather unattractive.



● ACE RATING 654

BLACK LAMP



● ACE RATING 612

ATARI ST

SLAP FIGHT

Imagine \$19.95cs

A classic case of too little too late, this one offers you at full price what budget releases have been doing better for the last six months or more. The shoot-em up, collectable weapons action is terribly dated, now the graphics are unimproved and the sound is really rather poor. Coming out a month after the substantially better *Xenon*, the game doesn't have a great deal to recommend it.

● ACE RATING 568



ATF

Digital Integration SA 95cs \$13.95dc

Spectrum version reviewed Issue 7 - ACE Rating 95d

A fine game on the Spectrum, this one's still a hot property on the CPC. Work out your own mission objectives, load up with Maverick homing missiles and reach for the skies. Trash enemy fighters, jam incoming missiles and find new targets as you zoom over the contours of the 3D landscape. The game's fast, bright - it uses Amiga's 16-colour mode to good effect - and extremely playable. Enjoy.



● ACE RATING 95D

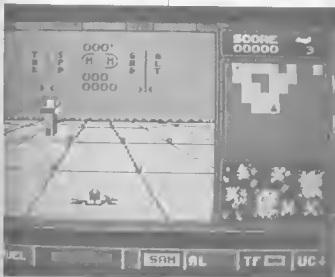
C64

ATF

Digital Integration SA 95cs \$12.95dc

Spectrum version reviewed Issue 7 - ACE rating 95d

The C64 Bobsleigh may have been disappointing compared with its Amstrad and Spectrum counterparts, but DSI have no such problem here. This is a cracking con-



version with fast moving terrain and good use of colour plus crucially all the game play of the original. The finely tuned combination of action and strategic depth just gives this one so much lasting value.

● ACE RATING 95D

AMIGA

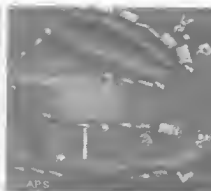
BONECRUNCHER

Superior Software \$14.95dc

C64 version reviewed Issue 6 - ACE Rating 94d

The puzzles here are exactly the same as in the C64 version of this soap-and-skeletons lounge, so you can bet that the gameplay's well up to scratch. The graphics are rather better and the music's spot on, making it even more presentable. Unusual stuff for the Amiga and very welcome because of that, this is strongly recommended for thinking gamers - especially at that price.

● ACE RATING 94D



BMX SIMULATOR

Codemasters \$14.95dc

This addictive budget title was a very popular 8 bit game and is now appearing on the larger machines. Pedal your way around seven courses competing against either a friend or the computer. Great game with lots of addiction.

● ACE RATING 81D

ROLLING THUNDER

US Gold \$24.99

Spectrum version reviewed Issue 4 - ACE Rating 71d

Amstrad version reviewed Issue 8 - ACE Rating 69d

Wonderful music and effects. A shame that the gameplay then, doesn't live up to expectations. Marginally better than the ST version.

● ACE RATING 73D

IBM PC

PIRATES

Microprose \$24.95dc

C64 version reviewed ACE Issue 1 - ACE Rating 73d

The games been fleshed out a little since it first appeared on the C64, with the addition of several extra pictures. Your ship is slightly easier to control and seems to be a little bit nipper on the PC than on the C64. This improves the game slightly and makes it fun to play for a while.



● ACE RATING 75d



In theory, the joy of playing computer games is that you don't need to go off and find a human opponent: the computer itself provides the opposition. That's all very well for games like chess – it's just you and your micro on equal terms – but when it comes to *Space Invaders* there's something missing...

DOUBLE TROUBLE...

You're not really competing against the computer at all in *Space Invaders* there's no semblance of equality, because it can keep throwing aliens at you all night. It will always win in the end. The only thing in doubt is whether you'll get more points than the next guy before you get killed – but that's where the fun starts.

It's obvious really if you're not on equal terms with the aliens, you're still on the same

level as other players. The game then becomes a multi-player let's see who can get the highest score effort. The micro and software are now only part of the game experience, with all that human needling and boasting playing a major part in the proceedings. The game involved can be very simple – the simpler the better, some would say – and yet have you totally hooked, simply because you're trying to beat other people. How much better would it be then if you could involve the

other people directly in your game?

Games programmers have been trying to encourage this sort of group game-playing recently by getting two or more players on screen at once. Games with two-player options have been with us since the dawn of the coin-op age but until recently they've only had one person playing at any one time. Players take turns at games like this handing over when they lose a life. This is *alternating* two-player action,

and as such it isn't really any different from the single-player game: the competition here is still just for high scores.

True multi-player games allow several people onto the screen simultaneously, either competing or (more recently) cooperating with each other. This kind of game has a long history too - look at Pong for example - but it's only recently that two-player has really taken off. Two-player racing games are all the rage with Code Masters' range of 'simulators' dominating the budget charts for most of last year.

Traditional one-on-one sport or martial arts games aren't the only growth area for multi-player action. Cooperative two-player shoot-em ups are the big business too - learn work against a bunch of aliens in all the rage - while advances in keyboard and joystick scanning are already offering three-player options on some C64/128 and ST games. With a specially-made cable, Microdeal's forthcoming ST Rambo-em up *Leatherneck* will be able to take four players at once - all on joystick! This really is a team we're talking about now - and the expansion needn't stop there.

Hybrid Arts can get a dozen or more people playing at once on their MIX Maze by linking its together, but you'll need a lot of machinery in one place if you want that sort of setup. The breakthrough will come when arcade games can run down the phone, linking you into one enormous game universe. Sounds fantastic? It's already happening in the States, where a major online service offers subscribers a real-time fight simulator. You want a hundred players from across the USA fighting it out in the slots? You want people whose never met learning up to crew a bomber? Then be sure to grab a copy of ACE next month for the low-down on Air Warrior and how a modem could change your ideas on games.

BMX SIMULATOR

Code Masters

Spectrum	£1.99cs
Amstrad	£1.99cs
C64/128	£1.99cs
Amiga	£14.99dk
Atari ST	£14.99dk

This marvellous simultaneous two-player bike-em-up has very nicely made it onto the 16-bit machines and how! You have



Combat School: Amstrad. Waggle your way in glory

to compete against a friend (or the computer) over a maximum of seven courses. The bumps and berms etc all affect your bike realistically and help to make the game incredibly addictive and tough. Watch out too for Codemasters' Professional BMX Simulator which provides an even tougher challenge.

COMBAT SCHOOL

Ocean

Spectrum	£7.95cs
Amstrad	£8.95cs
C64/128	£8.95cs
	£12.95dk

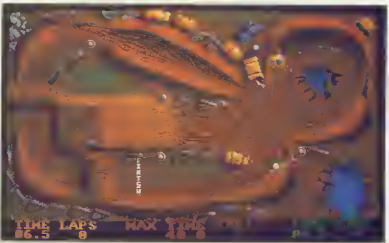
The latest in the long line of 'waggle' athletics games. This one's got a military flavour to it though, and seven separate

stages. There's no chance to cooperate with your friend, though as each player plays separately - for example on the first stage both players have to waggle their way across an assault course, and the screen is split horizontally with each player's character occupying one half. Other stages, however, do allow the players to compete - the rifle range for example. Combat School is certainly guaranteed to make your wrists ache and provides a lot of fun for both one or two players.

ORUO I/II

Firebird

Spectrum	£7.95cs
C64/128	£8.95cs
Amstrad	£7.95cs
	£12.95dk



BMX Simulator: Amiga. Career around the BMX courses and try to complete the set number of laps within the time limit.

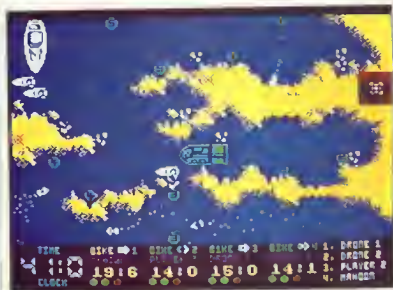
Best of the Graniset derivatives as the druid copes with the forces of evil. In both games the druid is equipped with a number of spells for zapping enemies or causing other effects in the original game one of the spells creates a sidekick called Golem - the second player.

HARVEY HEABANGER

Silverbird

C64/128	£1.99cs
Amstrad	£1.99cs
Spectrum	£1.99cs

Starkly original and tremendously playable this boney budget number combines elements of classic com-op Qix and



Jet Bike Simulator - Spectrum. Levels a hand around for some waterports

ancient oriental boardgame Go in its brain-bending gameplay. As your spherical character swings round the screen, hand over hand, he trails colour behind him. Surround areas of your opponent's colour with your own and you'll make cocktails (very handy) surround the opponent himself and you'll win the bout. Five levels of computer opposition make this one great value as well as great fun - and with a human Player 2 it's even better.

IKARI WARRIORS

Elite

Spectrum	\$8.99cs	\$12.99dk
C64/128	\$9.99cs	\$14.99dk
Amstrad	\$9.99cs	\$11.99dk
Atari ST		\$14.99dk
IBM PC		\$19.99dk

A classic amongst two-player games because it not only features frantic action but demands cooperation and agreed tactics between the players. It's basically a two-player version of *Command* with

tank driving thrown in.

The fighters make their way up a downward scrolling screen, initially armed with machine guns and grenades. You'll encounter enemy soldiers, pill boxes, tanks, helicopters, grenade launchers and much more. The best feature is when you can hop into a tank and drive that around crushing the enemy while player two follows safely behind until he can find his own tank. Also measure up superbly as a one-player game.

INTERNATIONAL KARATE

System 3

C64/128	\$6.50cs	\$12.99dk
Atari ST		\$19.99dk

Best of the many ST karate chop-em-ups that are now available. You have 16 separate moves to try out against your opponent, in front of such wonderful backdrops as the Sydney Opera House and Venice. This is pure competition stuff, you'll want to bash and slug your opponent as much as possible to impress the umpire and you get nothing for showing mercy.

JET BIKE SIMULATOR

Codemasters

Spectrum	\$4.99cs
Amstrad	\$4.99cs

This is one of Codemasters' plus range - which means that for just a couple of pounds more than the usual \$1.99 that Codemasters charge for 8-bit games you get two versions of the game - normal and expert. In *Jet Bike Simulator* you and a friend can charge around several water courses on your jet bikes competing against two computer drones. Simple but addictive fun.

MATCHDAY II

Ocean

Spectrum	\$8.99cs	\$14.99dk
Amstrad	\$8.99cs	\$14.99dk
C64/128	\$8.99cs	\$12.99dk

The definitive football game for 8-bit machines. You don't get to compete just against the computer though - you can play against a friend (enemy?) if you like - or the two of you can cooperate by ganging up on the computer which makes for plenty of fun. Terrific stuff for football fans, and a game that really shows how two-player options can add sparkle to an otherwise standard format.

PLUTOS

Tynesoft

Atari ST	\$14.99dk
Amiga	\$14.99dk

One of the first classic 16-bit shoot-em-ups. *Plutos* 2-player option really does double the fun factor. We're not quite sure exactly how many levels of play there are in the game but it takes perseverance to go beyond level 30 on your own - add a partner and you'll really



Plutos - Amiga. Should you steal points from your partner, or work together for progress?

get shifting up to level 60 and beyond.

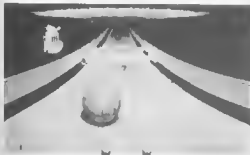
However the best thing about the game is the way you can choose your tactics to suit your temperament. On the one hand 2-player: Phobos can be a competitive blast-out as you both struggle to grab more bonuses more aliens and more points than your colleague. On the other hand, if you're in a pioneering mood you can work together very effectively trashing the opposition in unison and moving further through the levels to as yet undiscovered hunting grounds.

Simple visually attractive and a real adrenalin boost at the higher levels. Phobos is pure 2 player perfection. There's nothing in it that you haven't seen in a shoot-em-up before, but what's there represents classic simplicity by that's hard to resist.

ROADWARS

Melbourne House

Spectrum	£9.99cs	
C64/128	£9.99cs	
Amstrad		£19.95dk
Amiga		£19.95dk



Roadwars - Amiga: Time away the rogue panels - or each other

If you're after cut-throat competition with a friend then Roadwars could provide the answer. You take charge of one of two battleships that career down the continuously scrolling roads of Armageddon. If you're feeling cooperative you can help each other to take out the rogue panels that are to be found at either side of the road. But if you're feeling mean you can compete with your friend and try to force him off the road. The Amiga version may be by far the best looking but the Spectrum version actually has more playability.

ROOM TEN

CRL

C64/128	£9.95cs	£14.95dk
Spectrum	£7.95cs	

Amstrad £9.95cs £14.95dk

A split screen gives each player a view from behind his own bat in this zero-gravity 3D Pong-derivative. Written by Pete Cooke of Tau Cen and Academy fame the game uses great point-of-view 3D graphics to help you gauge where the ball is. Computer opponents possessing various strengths are on hand just in case you can't find a human being to play against but either way it's great fun.

SKULLDIGGERY

Nexus (distribution now uncertain)

Atan ST £19.95dk originally

Probably the best Boulderdash clone around so if you haven't got an ST you can eat your heart out. Even if you have you may experience some frustration since Nexus ceased trading recently and the future of Skulldigger is in doubt.

That's all the bad news however. The rest is all good. Unlike the original Boulderdash there's a two-player option in Skulldigger where you fight

SUPER SPRINT

Activision

C64/128	£9.99cs	£14.99dk
Spectrum	£9.99cs	
Amstrad	£9.99cs	£14.99dk

This simple overhead view racing game conceals a fascinating mix of cooperation and competi-

tion. It is fast and furious and a fast life affects the both of you. Cooperation is necessary simply because of the way the game is structured. When you're in two-player mode you and your friend can find yourselves each with two bats to control - this is not normally too much of



Super Sprint - Spectrum: Oats those spanners before anyone else does!

tion in two-player mode. You want to come in ahead of your opponent and collect enough spanners for a tune-up too but it's vital that one of you beats the computer-controlled drone otherwise it's game over for both of you. Do you leave the spanners for the other player if he needs a tune-up - extra speed, better handling etc - or play dog-in-the-manger and risk both of you losing on the next track? Interesting stuff, would have thought a racing game would turn into them against us.

a problem except when you consider that control of the bats switches randomly between the players. Wacky fun that's best enjoyed by two.

WAY OF THE EXPLODING FIST

Ricochet

Spectrum	£19.99cs
C64/128	£19.99cs
Amstrad	£19.99cs

Should you own an 8 bit machine and you're on the look out for a high class beat-em up then look no further than this little number. Originally released at full price by Melbourne House you can now snap this game up at a bargain price. Like International Karate you've got 16 moves to use against your opponent in the fight to impress the judge. Mmm, cut-throat action for those who like their competition fierce.

...TRAZ

Cascade

Spectrum	£9.95cs	
Amstrad	£9.95cs	£14.95dk
C64/128	£9.95cs	£14.95dk
IBM PC		£19.95dk

Cooperation is a must if you hope to complete any of this Breakout clone's 64 screens. In two-player mode you'll get nowhere fast if you try to compete with a friend because the

madly to grab as many diamonds as you can before your opponent. The screen is split horizontally with each player viewing the map area surrounding his current position. If you both wander into the same area you can then see each other on both screens.

One of the best things in double-diggery is however nothing to do with collecting diamonds or going for higher scores. It's the sheer ecstasy of ambushing your opponent and splatting him with a carefully nudged boulder just as he's about to collect his final diamond. Of course you'd never do a thing like that would you? Oh yes you would.



Traz: Get Random hit switching will test your reactions to the fall

STRATEGY SPECIAL

What is it about strategy games that attracts a certain kind of games player? Could it possibly be something to do with long-term interest? With a bit of strain on the old grey matter? With the varying game-play from game to game? With the relentless strength of the computer opposition? People are beginning to realise that strategy games can provide much more of a lasting challenge than the average shoot-em-up coin-op conversion. When did you last lie awake all night devising a sure-fire strategy to defeat a particular wave of *Space Invaders*?

Since the arrival of 16 bit machines in the games market, the future for the strategy genre looks brighter than ever. Programmers quickly acquaint themselves with new machines and we shouldn't have to wait long before we start to see highly imaginative strategy epics that involve the player to a degree high on impossible on an 8 bit machine. Rainbow's *Universal Military Simulator* is just the beginning.

So what's the current state of play on the strategy games front? Here are the latest contenders to test your mettle on the battlefield.

June 6th 1944 saw the start of operation Overlord — the invasion of Normandy by the allied British, American and Canadian forces. This latest release from CCS attempts to re-create this operation, widely regarded as the decisive western battle of the Second World War. Inspiration for the game was drawn extensively from the Max Hastings book 'Overlord'.

The program is for one player and allows you to control the allied forces only, though there are three difficulty levels. The object of the game is to land your forces, secure the beaches (to allow reinforcements to land) and then break out and reach the right hand edge of the game map. The game can end before then, however should either side's effectiveness be reduced to below 40 per cent.

The game breaks down into two broad phases

es — the landing of reinforcements and the issuing of orders. Your limited supply of reinforcements can only come ashore at beaches which are in your control and which are clear of other units. Issuing orders is effected unit by unit, and involves placing a cursor at the required destination, first for the unit's centre — and then for each of its flanks. Once all the units have been positioned, movement of the allies occurs — followed by any resulting combat. Then the German forces move and combat is resolved again.

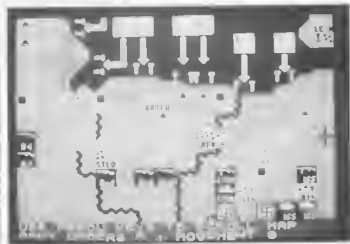
The game plays well, and the screen layout is simple but effective, though mistakes are hard to correct so each step has to be carefully considered. The easiest level poses no great problems while the hardest will provide you with a tough challenge. The additional beaches available to the player at the start of the game (those not used for the real landings but which easily could have been) allow the player to play several what-if scenarios.

OVERLORD

CCS

Spectrum

£9.95cs



SPECTRUM Overlord

OPPOSITION 07 EASE OF USE 07
DISPLAY 08 GAME DEPTH 08
ACE RATING 845

LORES OF CONQUEST

Electronic arts

C64/128

£9.95cs

£12.95dc

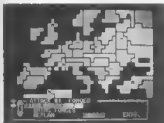
IBM PC

£14.95dc

Up to three players can compete against each other in this game of conquest. The idea's very simple — an area of land is divided into irregular shapes (like counties) and each player tries to conquer the opponent's territories. There are some 20 pre-set areas including simplified maps of the World, America, Europe and the Middle East. You also get the chance to design your own maps or you could even request the computer to generate a unique map. Once you've settled on

which map you're going to use, the computer randomly distributes resources throughout the game area. These take the shape of small icons representing cities etc. Next comes the dicing up of the territories. The players each select a territory in turn until all are occupied – then battle commences.

There are several aspects of the game which the player can define, including the degree to which chance will influence the result of a battle, or the amount of resources available at the start of the conflict. The instruction manual is not truly helpful, but it doesn't take long to pick up the rules of the game – and once you have it becomes very entertaining – especially if you play with a friend or two.



PC: Lines Of Conquest

OPPOSITION 07 EASE OF USE 06
DISPLAY 06 GAME DEPTH 05
ACE RATING 835

POWER STRUGGLE

PSS

Atari ST

£14.99dk

Superpower politics raise their ugly head in this PSS strategy game that offers one or two players the chance to influence countries through political, economic and military means. Each game turn allows the player to do as much trading, persuading and conniving as possible within a time limit. Once the time limit expires, the game map of the world updates and you start on the next turn. The game is limited to a few options only and the computer opponent is not much of a match for the averagely competent megalomaniac.



ST: Power Struggle

OPPOSITION 05 EASE OF USE 07
DISPLAY 06 GAME DEPTH 05
ACE RATING 620

FIREZONE

PSS

Amstrad

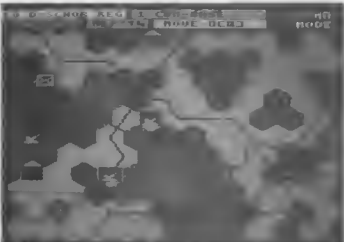
£12.99cs

£17.99dk

This one or two player wargame set in the 21st Century comes complete with a scenario designer program that allows you to design and fight your own battles. The disk version of the game comes with nine pre-set scenarios while you only get three on cassette. The terrain for each game is divided into hexagons and the victory conditions for each scenario are roughly the same – i.e. you have to destroy all the opponents pieces or force them to retreat. While the display is colourful, the screen updating is tediously slow as the screen is re-drawn rather than scrolled. Firezone breaks

down into four sections: moving your forces, firing, waiting for your opponent's moves and firing again. Unfortunately, much of the damage either incurred or dished out seems to be left to chance which narrows your scope for tactical planning. A simple wargame then that provides a nice design feature and a vicious computer opponent but not much else.

OPPOSITION 08 EASE OF USE 06
DISPLAY 07 GAME DEPTH 06
ACE RATING 710



Amstrad: Firezone

16-bit strategy explosion...

There are two distinct strands in the strategy world. First, you've got the conflict scenario second, you've got strategy simulations, in which the strategic element is, for example, commercial or political (as in the old game Diplomacy).

Most 8-bit strategy software has had to make compromises. Large amounts of data mean less room for graphics and the depth of play can be limited by processing power. These problems do not apply to anything like the same extent with the new 16-bit machines, so what changes can we expect to see?

First, better user interfaces. Rainbird's Universal Military Simulator offers user-definable maps and a large number of control screens to help the player 'drive' the simulation. In addition, the extra memory allows larger simulations and therefore greater strategic depth. It also means the program runs faster.

Second, better graphics. With all that extra RAM and higher resolution, there's now room for digitised maps, diagrams, and even animation sequences.

Finally, greater depth of play. Software houses can use more powerful development tools on the new machines to produce more

intricate software, with wider playing options.

All this adds up to the possibility of strategy games moving more and more to the top of the games charts. There's a good reason for this – there just isn't any room in a 20p-a-game arcade environment for the development of anything other than scoring tactics – strategy just can't enter into it. For this reason, pure-blooded strategy, together with role-playing, has always been the poor cousin of straight forward arcade action – but stand by for big changes in the days ahead.



Rainbird's Universal Military Simulator on the PC – sign of changes to come in strategy software?

Play By Mail (PBM) gaming has grown vastly in popularity over the last few years – adventure and strategy, trade and conquest, game-scenarios of all kinds and involving hundreds of players simultaneously can now be played by post.

There have been excellent human and computer moderated PBM games around for years now, riding by the standards of many new games displayed at the recent Third British Play By Mail Convention, they will be with us for years to come. Check out the following goodies that were launched at the Convention.

TIME TRAVEL

One of the most interesting new concepts in Play By Mail gaming displayed was the introduction of a new dimension, time. Votcom games (59 Juniper Birch Hill Backwell) Berks RG12 4ZC have now started running their new computer moderated game *The Time Sentinel*. In the game space-time is regulated by a crystal located on a far off world. Some-

among the same 52 locations). Clever stuff

BRAVE NEW WORLD

As far as computer programming goes, this is a real head turner. New to the PBM scene (but old hands at the boardgaming scene) Standard Games. *Dark Blades* could well prove to be a classic. Developed from their board game of the same name, *Dark Blades* is an intelligent computer moderated Fantasy Role Playing (FRP) game. Within the computer there exists a real world containing (claim Standard) thousands of creatures with characters built up from up to seventy characteristics.

Over 100 players battle it out in the Land of *Dark Blades* for survival. The game boasts a lot of interesting features, although the most attractive element must be the computer-

tion of characters to the point where they are almost as capable as individual human players. Standard reckon that the game could play itself – sadly the only way to prove this would be for every player to drop out and we don't really want that, do we?

Exact details of the PBM version of *Dark Blades* remain uncertain at the time of going to press, but we can tell you that the price is very cheap and the startup pack is VERY impressive indeed. The address? Standard Games PBM, Axton House, Station Road, Kings Langley, Herts WD4 8LF.

TEAMWORK

Many Play By Mail games are moderated with a mixture of computer efficiency and human ingenuity. Two good new examples of such games are in *Dubious Battle?* (try Pan-

PLAY IT... BY MAIL

how the crystal shatters and its fragments fall through time – sometimes even ripping the fabric of time itself.

You join a number of other independent members of the space corps in a journey through time to reassemble the crystal. The clever bit is that the game environment has only fifty-two physical locations, but each location exists in many timescales (not necessarily containing the same thing).

Here's a good example of the way the game system works: you find a part of the crystal in location 36 during year 50. You have something to do in a different location in year 40; this action may take you 12 years to complete. Therefore you deposit the crystal at a location in year 51 before travelling back to year 40.

When you begin this time-consuming action in the year 40 the crystal is nowhere to be seen – come completion of the action in the year 52 it's there waiting for you! Confused? It gets worse, but that's enough for this month!

The possibilities of this game really become apparent when you consider the large number of other players all moving about through time in the same world (and



While play-by-mail games continue to grow in popularity it is nice to see that some of the old favourites are still going as strong as ever. *The Tribes of Germe* is still regarded by many as one of the best board games and it looks to be going from strength to strength – two years after it's birth. You don't get many arcade games lasting that long!

dem Games, PO Box 127, Belfast BT9 5ED Northern Ireland) and *Order Of Chaos* (under development by Odds Fellows & Co from Gloucestershire).

Both games enable you to play God. In *Dubious Battle* your aim is to become deity (the Godfather?) by gaining power through support from the mortals of the world below you or from gaining control of Wyrum (Land of the Gods). The clever touch to this game is the use of two playing arenas.

Order Of Chaos, once launched, will be equally interesting. In a nutshell this game takes over from the Christian God after Creation. It is the players' task to forward the process of Evolution in the battle of the World Shapers against the Lord of Chaos. You navigate the River of Life with the aim of creating a base for Civilisation. Far too complex to sum up in a single page review, but watch out in further coverage in a future issue of ACE.

So there we have it. Advanced Computer Entertainment in the world of Play By Mail gaming. In future issues we'll be bringing you the latest reports, news and gossip from this growing area of entertainment. See you next month.

FREE STICK

HOW TO ORDER

METHOD 1. Use one of the ACE Reader Offer forms printed near the start of the Pink Pages

METHOD 2. Call 0458-74011 and ask for ACE credit card orders

This fabulous £14.95 Quickshot 2 Turbo is yours for nothing when you subscribe to ACE!

Oh boy, this one's a goodie. Take out a 12-issue subscription to ACE for just £17.95, and we'll send you Spec-travideo's state-of-the-art joystick absolutely free of charge.

So not only do you get a year's supply of Britain's hottest computer magazine delivered hot off the press direct to your door, you also get a superb piece of kit to help you extract maximum pleasure from your machine.

It's a great offer, folks.

JOYSTICK FEATURES

- Rugged build with metal shaft
- Uses microswitches for extra precision and reliability
- Specially moulded shaft for extra comfort
- Two fire buttons on stick
- Superfast autofire
- Suitable for left or right-handed players
- Rubber suckers for fastening to smooth surface
- Recommended retail price £14.95



WE ARE THE CHAMPIONS

Ocean

Shining value compilation including Barbixan, Renegade, Rampage International, Kamie & Super Sprint

Version	RMP	ACE price	Order code
Spectrum case	9.95	8.95	AC1435C
CBM 64 case	17.95	13.95	AC1435D
CBM 64 disk	8.95	8.95	AC1435C
CBM 64 disk	17.95	13.95	AC1435D
Amstrad case	8.95	8.95	AC1434C
Amstrad disk	17.95	13.95	AC1434D

ARKANOID 2

Imagine

The Revenge of Don. Another impossibly addictive break-out challenge

Version	RMP	ACE price	Order code
Spectrum case	7.95	6.25	AC1444C
CBM 64 case	8.95	6.95	AC1444C
CBM 64 disk	12.95	10.95	AC1444C
Amstrad case	8.95	6.95	AC1444C
Amstrad disk	14.95	11.95	AC1444D



IMPOSSIBLE MISSION 2

US Gold/Epyx

Follow up to a stunning classic featuring the evil Professor and his robots

Version	RMP	ACE price	Order code
CBM 64 case	9.99	7.95	AC1455C
CBM 64 disk	14.99	11.95	AC1455D
Amstrad case	9.99	7.95	AC1454C
Amstrad disk	14.99	11.95	AC1454D
Atari ST	19.99	18.95	AC1455T

BOBSLEIGH

Digital Integration

Superb simulation of the exciting winter sport

Version	RMP	ACE price	Order code
Spectrum case	9.95	7.95	AC1555C
CBM 64 case	9.95	7.95	AC1555C
CBM 64 disk	14.95	11.95	AC1555D
Amstrad case	9.95	7.95	AC1554C
Amstrad disk	14.95	11.95	AC1554D

ARCAOE FORCE 4

US Gold

4 game compilation of Road Runner, Indiana Jones, Gauntlet and Metro Cross

Version	RMP	ACE price	Order code
Spectrum case	8.99	7.95	AC1475C
Spec-3 disk	14.99	11.95	AC1475D
CBM 64 case	8.99	7.95	AC1475C
CBM 64 disk	14.99	11.95	AC1475D
Amstrad case	9.99	7.95	AC1474C
Amstrad disk	14.99	11.95	AC1474D
Atari ST	24.99	19.95	AC1475T

TARGET RENEGADE

Imagine

Violent follow up to the violent combat game

Version	RMP	ACE price	Order code
Spectrum case	7.95	6.25	AC1425C
Spectrum disk	14.95	11.95	AC1425D
CBM 64 case	8.95	8.95	AC1425C
CBM 64 disk	12.95	10.95	AC1425D
Amstrad case	8.95	8.95	AC1424C
Amstrad disk	14.95	11.95	AC1424D

A.T.F.

Digital Integration

ACE-revived combat flight simulator with stunning 3D graphics and high playability

Version	RMP	ACE price	Order code
Spectrum case	8.95	8.95	AC1545C
Spec-3 disk	12.95	9.99	AC1545D
CBM 64 case	8.95	8.95	AC1545C
CBM 64 disk	12.95	9.95	AC1545D
Amstrad case	8.95	8.95	AC1544C
Amstrad disk	12.95	10.95	AC1544D



PLATOON

Ocean

Powerful action based on the award-winning war film

Version	RMP	ACE price	Order code
Spectrum case*	9.95	8.95	AC1365C
Spectrum disk	14.95	11.95	AC1365D
CBM 64 case	9.95	7.95	AC1365C
CBM 64 disk	14.99	11.95	AC1365D
Amstrad case	9.95	7.95	AC1364C
Amstrad disk	14.95	11.95	AC1364D

COMBAT SCHOOL

Ocean

The Konami arcade game featuring seven grueling events

Version	RMP	ACE price	Order code
Spectrum case	7.05	6.25	AC1315C
CBM 64 case	9.95	8.95	AC1315C
CBM 64 disk	17.95	10.95	AC1315D
Amstrad case	8.95	8.95	AC1314C
Amstrad disk	14.95	11.95	AC1314D

CALIFORNIA GAMES

US Gold/Epyx

The best Epyx sports smashes yet. And that's saying something

Version	RMP	ACE price	Order code
Spectrum case	9.99	9.95	AC1355C
Spec-3 disk	12.99	9.99	AC1355D
CBM 64 case	9.99	7.95	AC1355C
CBM 64 disk	11.99	8.95	AC1355D
Amstrad case	9.99	7.95	AC1354C
Amstrad disk	14.99	11.95	AC1354D

XOR

Logotron

Ingenious maze-escape game, packed with mind-bending puzzles. Original and very compelling. ACE Rated 5/7. Extra special price!

Version	RMP	ACE price	Order code
Spectrum case	7.95	6.25	AC1425C
CBM 64 case	8.95	8.95	AC1425C
CBM 64 disk	12.95	9.95	AC1425D
Amstrad case	8.95	8.95	AC1424C
Amstrad disk	14.95	10.95	AC1424D
88C case	9.95	8.95	AC1426C
88C disk	12.95	9.95	AC1426D

ROLLING THUNDER

US Gold

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Version	RMP	ACE price	Order code
Spectrum case	8.95	8.95	AC1455C
Spec-3 disk	12.95	9.99	AC1455D



ROLLING THUNDER

US Gold

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Version	RMP	ACE price	Order code
Spectrum case	8.95	8.95	AC1455C
Spec-3 disk	12.95	9.99	AC1455D

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

Impressive conversion of the Namco coin up football, air and underwater cop platform shoot-em-up action

10
HIT
GAMES

GAME SET and MATCH

Ocean

A massive compilation of 10 complete sports games - including Konami's HyperSports, Ping Pong and Tennis, Daley Thompson's Super Test, World Series Baseball, Pool Championship Basketball, Barry McGuigan's Boxing, Super Soccer and more incredible value!

Version	RMP	ACE price	Order code
Spectrum case	12.95	9.95	AC1205C
CBM 64 case	12.95	9.95	AC1205C
CBM 64 disk	17.95	13.95	AC1205D
Amstrad case	12.95	9.95	AC1204C
Amstrad disk	17.95	13.95	AC1204D

ATARI ST TITLES

(in addition to those elsewhere)

Don't miss the incredible OIDS and DUNGEON MASTER both ACE RATED in the high 90s! Leaderboard is the definitive golf simulation. UMS an innovative war game. Wizball an addictive, original bounce-em-up. Slapshot a combat game

Version	RMP	ACE price	Order code
Oids	19.95	19.95	AC1485T
Dungeon Master	24.99	19.95	AC1485T
Slapshot	19.95	15.95	AC1505T
Wizball	19.95	15.95	AC1505T
California Games	19.99	19.95	AC1355T
Leaderboard	24.99	19.95	AC1505T
UMS	24.95	19.95	AC1505T



ACE SPECIAL OFFERS

Your chance to buy some of the hottest titles around and save money!

• Fast delivery • Friendly service • Fabulous discounts

HOW TO ORDER

Just make a note of the details of the items you want, including the order code. Then fill these in on the free-post form printed on this page.

Post this, together with your credit card details or cheque to the Free Post address listed - you need pay no postage. Alternatively ring 0458 74011 and ask for ACE Credit Card Orders.

PLEASE NOTE

1. All items are despatched by first class mail.
2. We have tried to list only those versions of software which are available NOW.
3. All prices include VAT, postage and packing.
4. You will normally receive software within 7 days of ordering. Please allow 2-3 weeks in case of temporary shortages.

AMIGA TITLES

(in addition to those elsewhere)

World Games and Winter Games are the Epyx sports classics. Hardball is a great baseball simulation. Leaderboard the definitive golf simulation. Jinxer is an adventure.

Version	RSP	ACE price	Order code
World Games	24.95	19.95	AC10AAM
Leaderboard	24.95	19.95	AC151AM
Hardball	24.95	19.95	AC155AM
Jinxer	24.95	19.95	AC139AM

IBM PC TITLES

(in addition to those elsewhere)

These leading games should also run on Amstrad PCs and other compatibles. Elite is the definitive space trading and combat game. Tomespeak is a sophisticated flight simulator. Hardball is a great baseball simulation. World Class Leaderboard the definitive golf simulation. Jinxer is an adventure. UMS a wargame. Tetris an addictive puzzle.

Version	RSP	ACE price	Order code
Elite	24.95	19.95	AC105PC
Tomespeak	24.95	19.95	AC139PC
Calisma Games	19.95	15.95	AC135PC
World Leaderboard	24.95	19.95	AC161PC
Hardball	24.95	19.95	AC152PC
Jinxer	24.95	19.95	AC128PC
U.M.S.	19.95	15.95	AC149PC
Tetris	19.95	15.95	AC153PC

SUBSCRIPTION OFFER

If you want a fantastic deal, turn back one page and have a look at our subscription offer a FREE JOYSTICK!!.

Remember - your current joystick won't last for ever.

ORDER FORM

Please rush me the following items.

Order code	Title	ACE Price
1.		
2.		
3.		
4.		
5.		

Total Software Order Box A

SUBSCRIPTION ORDERS

Send this form to
ACE Reader Offers
FREEPOST (BS4900)
SOMERTON
Somerset TA11 7BR

No stamp required if posted in the UK, Channel Islands or Isle of Man

☐ Tick here for a 12 issue subscription to ACE costing £17.95. This entitles you to a FREE Quickshot Turbo joystick (RSP £14.95)

Subscriber's total payable
(Box A + £17.95)

Box B

Name

Address

Phone (if poss)

Computer

Method of payment ☐ ACCESS ☐ VISA ☐ CHEQUE ☐ P.O.

Cred. card no.

Exp. date

Please make out cheques and postal orders to Future Publishing Ltd
This form is valid until May 31st, 1988



CREDIT CARD HOTLINE
0458 74011



Hack'n'slash and Shoot-em-up

RIMRUNNER



Hit that fire button hard to survive in Rimrunner.

The latest game from Palace is a manic shoot-em-up for the Atari ST.

Now available for the Amiga and the ST **Barbarian The Ultimate Warrior**, the classic hack'n'slash game.

PALACE

MAKING MUSIC

Most people can pick out a one-finger tune on a keyboard, or strum the odd chord on a guitar. Whatever your instrument, MIDI allows you to exploit even the most rudimentary skills to create music for your own and other people's enjoyment. At the simplest level, a keyboard such as the Casio CZ230S, which has 100 varied and usable pre-set sounds and a programmable rhythm accompaniment, used in conjunction with readily available software, will enable you to produce music beyond the scope of your normal playing ability.

Alternatively, one of the increasingly affordable MIDI guitars now on the market (Casio DG20 at \$279, or MG650/\$10 or \$549), will allow the guitarist access to all the superb sounds of modern synthesizers. In fact you don't even have to buy a synth - most manufacturers produce what is called an 'expander' - a synth without all the expensive bits - keyboard, buttons, sliders etc. - that uses your computer or other MIDI instrument (MIDI guitar for example) as the controlling device.

Expanders can represent tremendous bang-for-the-buck. The Roland MT32 for example has much of the internal circuitry of the \$1200+ D60 synth but costs only \$450. It gives you an astounding 32 voices to play around with in full stereo - literally an orchestra under computer control.

SAMPLING

Sampling is the conversion of real world sounds to numbers and the subsequent manipulation of those numbers which allows the sounds to be played or sequenced by a MIDI instrument. There are many sampling keyboards and expanders now available and their potential for creative music making is enormous. They enable you to take any recordable sound or dropped dublin lid or your kid brother's whining and play it from a keyboard or sequencer. They work particularly well with short sounds and so are great for sequenced drum parts but a good quality sampler will allow you to re-create any instrumental sound as well as giving wide scope for experimenting with your concerto for scolded cat. They are serious tools as well as being fun.



Sonix Masterpiece sequencer - a fully featured 32 track recorder for less than the price of a good stereo.

PRACTICAL MIDI

Even if you don't know Middle C from the Mediterranean, MIDI can help you express yourself musically in ways you never thought possible. Part two of our no-nonsense guide to home music-making continues as Keith Ansell looks at the different uses for MIDI and ways in which you can exploit the new technology.

COMPOSING/SONG WRITING

Sequencers make excellent song writing tools, even if you have never composed a tune before. One approach is to start the sequencer recording in real-time and then just relax and doodle away at the keyboard (or MIDI guitar or even a wind controller that enables wind instrument players to generate MIDI data) until it stops. Then play it back and listen for any sections that seem to have potential, scrap everything else and continue doodling on a different track while listening to the first. Sometimes this technique produces garbage, sometimes usable ideas but it is always enjoyable.

Furthermore, with software such as PRO24 for the Alan ST anything thus

recorded can be edited in music notation form and printed out as a score for others to play.



One of Stanberg's Pro-24 edit screens, with full manuscript possibilities.

SEQUENCING

'Sequencing' software is just jargon for a musical word processor-cum-multi track recorder that enables sound data to be manipulated at will. There is a wide range of excellent sequencing software available and it should form the heart of a MIDI system.

Data can usually be entered in several ways:

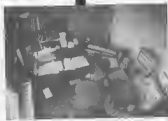
- **Real-time recording:** the sequencer records the notes as you play them on your MIDI instrument. Because it is data that is recorded, not sound, it can be played back through any other MIDI instrument(s) and the sound can be altered during playback in ways that would be impossible by any other means. So you can play a tune on your MIDI guitar, then replay it through your keyboard.
- **Step-time recording:** Several possibilities depending on your sequencer - enter notes one at a time from an instrument specifying the time value for each note, or create a visual pattern by entering notes on a grid, or enter notes in music notation form (great for creating your own version of anything published as sheet music - just transcribe the dots then orchestrate).

The best thing about sequencers is that they enable you to edit your playing and really get the best out of it - altering the sound until you get it just the way you like it. Without MIDI the only way to do this would be to spend years investing in expensive equipment and refining your playing techniques.

MULTI-LAYER SOUNDS

MIDI allows you to play or sequence up to 10 different instruments set to different channels or you could have sixteen instruments playing the same thing on one channel. This might be a little over the top, but layering two or three different sounds can be made rich and powerful by adding to it a horn or trumpet or another synth or expander, especially if one sound is slightly detuned relative to the other. Or widely-contrasting sounds can be mixed to create totally new and individual sound colours.

If you have a keyboard with say 100 pre-set sounds then the addition of a low-cost expander such as a Yamaha TX7 (which has 32 resident voices) will give you 3 200 possible sound combinations with infinite potential for new combinations by loading new banks of sounds into the TX7. If instead of the TX7 you had a TX81Z which allows you to trade the number of notes played simultaneously (polyphony) for the number of different sounds played at once (multi-timbrality), then the number of possible permutations becomes astronomical. With 8-note polyphony you could have 12 800 2-layer sounds (the TX81Z has 128 voices on board), with 4-note polyphony you could have 128 x 128 x 100 possible 3-layer combinations, and when considering the monophonic possibilities we'll have to stop the maths due to shortage of space for lengthy strings of zeros.



A lot of information can be fitted into a small space, and the MIDI standard enables you to keep everything in sync.



Steinberg's Pro-Composer allows you to edit sounds on the DX7 TX81Z and TX816 - and arrange them in banks as well.

SOUND EDITING

One of the reasons many of today's high-tech instruments are so affordable is that the buttons used to programme them are made to perform several functions, this keeps the cost down, but makes getting the most from the instruments very difficult, particularly as they usually have only a small liquid crystal display.

Full-screen editing of synthesiser sounds is now possible for many leading instruments via affordable software that often allows you to do things with the synth that would be impossible without the computer. For example many editing packages will allow you to take two of the synth's pre-set sounds and blend them together until you end up with a sound somewhere in between. Suddenly the arcane task of synthesising becomes more comprehensible and you can build up libraries of sounds on disc which the software allows you to transfer easily to the synth's memory banks. These discs can then be swapped with other users or even - if the sounds you program are particularly good - offered for sale.

RECORDING TO TAPE

Sequenced compositions can of course be stored as computer data on disc or cassette, however it is likely that at some stage you will want to record your work in a more readily playable form as a stereo (sound) cassette. No problem here - many MIDI instruments have an audio out socket that you can use to record directly onto tape.

SO WHAT CAN I DO WITH IT?

It is hard to think of a more satisfying and enjoyable use for a home computer than creating music, but in case your personal satisfaction is not enough, here are some ideas for possible applications.

- Sound effects and incidental music for amateur theatrical performances.
- Education - it is nearly impossible not to learn more about music while using this gear, and like all the best learning experiences, it is hugely satisfying.
- Instrumental backing tapes for pub/shub singers.
- Sound tapes for local groups - club carol concerts, music and movement classes, play groups, etc.
- Music to Measure - background music for parties, party-play, sitting, local society meetings, etc.
- Practice tapes for singers or instrumentalists, with the part to be practised missing from the mix.
- Soundtracks for home videos (An SMPTE sync unit may be needed for the one, although you could edit your visuals to match the sound).
- Demo tapes for singers/songwriters.
- Compose songs for down-loading via modem to Machine's Music City Service.

I've recently purchased an Atari 520STFM and I'm interested in finding out what it can do as regards music. I don't have any MIDI equipment yet though.

Jon Whitlock, Suffolk

The ST is currently the world's favourite music micro for amateur or professional applications. There are several packages which will help you create three-part music on its built-in sound chip (see your local software shop) but because the ST has built-in MIDI sockets it's most popular for use in conjunction with other MIDI-equipped instruments.

The main applications would be in recording MIDI data to recreate complete musical compositions editing and storing the sounds of synthesizers and perhaps sound sampling. Originally it was impossible to do all these at once with one ST, but that situation is slowly changing.

If you want to really test out the ST start with an on-board sound manipulator such as The Music Construction kit from E.A. then get a cheap sequencer package such as Mithras SuperConductor (£49 although there are some good sequencers in the Public Domain too) and a MIDI synth such as the Casio CZ-101 (£180 second hand). Those will probably give you the music bug and after that the sky's the limit.

I have an Amstrad CPC6128 and Casio MT-210 synth - how would I connect them together? I saw a package called MIDITrack at the Amstrad Show but since it is £69 I decided to wait a bit and look around.

Daniel Herman, Liverpool.

As far as I know you won't perturb the CPC to play the MT-210 as the latter has no MIDI. You'll have to start by trading it in for a CZ2305 or similar MIDI synth, once you've done so you'll find MIDITrack as good as any other CPC sequencer and there aren't any very much cheaper ones to consider.

I have designed and built a MIDI interface for my Amstrad CPC6128 and want to use it to re-program the voices of my Casio CZ2305 and program the rhythm section.

Brian Gillon, Chatham

Congratulations on building your own interface but it won't allow you to re-program any sounds on the CZ2305 other than the last four 96-99. Any CZ Editor such as those from EMR or DMC provided be suitable provided your interface is fairly standard memory 99 is usually used as an edit buffer while you're working.

The CZ2305 can't channel incoming MIDI data to the drum sounds, so you're stuck with on-board composition. Sorry.

I own a Yamaha DX 100 MIDI synth and an Atari 520STFM with Super Conductor. I want to make my synth multi-timbral to make the most of the 16 tracks available.

Mark Conolly, Dumbarton.

You can't make the DX 100 play more than one different sound at a time - but Yamaha's

MIDI PANEL OF EXPERTS

The letters we've received range from four-line requests for information on the sum total of all software available for a particular computer, to four-page epics about debugging existing MIDI systems. Your MIDI Agony Aunt is Mark Jenkins.

FB-01 module will do exactly that. It can play eight notes simultaneously and you can assign any number of notes to any of its hundreds of sounds provided the total is eight. So a mono bass line, three-note string chords, two-note brass, a lead line and a silly effect could all be programmed and controlled from different tracks of Super Conductor. The sound quality of the voices is virtually identical to those of the DX-100. In fact DX-100 and FB-01 sounds are interchangeable. You'll need editing software to create new sounds on the FB-01; this can be obtained from Soundbits and many other companies via any music shop.

Is it possible to connect the Atari 520ST's 'audio out' socket to a hi-fi to improve sound quality? I own a Casio CZ2305, CZ5000 and Yamaha Clavinova and would be grateful if you could recommend some affordable software to use'.

Craig Donald, Ayrshire

Buy a spare monitor plug from your local dealer, carefully wire up the audio and earth pins to a pair of phono plugs as below and you'll hear your ST's built-in sounds through a hi-fi. As for MIDI keyboards, Super Conductor from Michton is the best bet - a powerful but straightforward 16-track polyphonic sequencer which will let you create long compositions and hold up to 10 in memory simultaneously. A bargain at £49.95.



Yamaha's new DX11 - multi-timbral possibilities for summer '88

I've been a very low-tech lead guitarist for many years but now have an Atari 520STFM with Steinberg Pro-24 software, a Cheetah MX5V mother keyboard and Roland TR605 drum machine. Can I sync the Atari or 505 directly to one track of my TASCAM Portastudio? Can I use the Atari or 505 directly to one track of my TASCAM Portastudio? Can I use the Atari as a sampler and control the samples from a MIDI guitar like the Casio? I'd like to be able to sample my favourite guitar sounds and sequence them. Where are the Atari's audio input and output ports? How can you record samples with them? Can the new Cheetah DPS pads be used to trigger the 505? How could I link up two MIDI controllers such as a guitar and a keyboard into the single MIDI input of the Atari? Geoff Rees, Cheshire

Phew! We ought to be on consultancy rates

for this one. To take your questions one at a time: the TR605 will sync to tape and will then clock the Atari for playing back MIDI data in synchronization with music on tape. But if you want to record MIDI data at the same time you'll need a merger - see below.

There are a couple of cheapish ST-based samplers such as Pro Sound Designer which could be played by a MIDI guitar but none of them will let you simultaneously load up and use Steinberg to sequence their sounds. To do that you need a new system called Lynx at around £1,500. Your best bet is to buy a second-hand Atari 5612 sampler (about £300), stick your fave guitar sounds in there and sequence them from Steinberg.

The Atari's audio in-outs are pins on the monitor socket and aren't used by any of the samplers we mentioned. Cheetah's DPS pads should play the 505 but still aren't available to check the fact at the time of writing. A Roland Octapad will definitely do the job though.

To use both keyboard and guitar controllers to send MIDI into the ST without re-plugging you'll need a MIDI switcher or patch selector - the Philip Rees model is good value. But since you also need to be able to combine incoming note data with time signals from your tape sync while recording, a MIDI merger would be more useful to you. There aren't many cheap ones available yet, but check with your local music shop to see what they've got in stock.

I've played electronic keyboards for some time but will soon be buying a Yamaha DX75 - what can I do when it's linked to a ZX Spectrum via a MIDI interface?

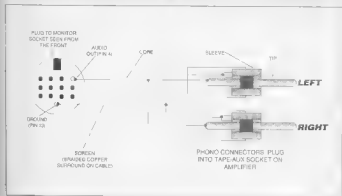
Steven Strassheim, Tyne & Wear

There are plenty of Spectrum interfaces and software packages about - ZXI EMR and others should still be in music stores like Rock City in Newcastle. You can record performances in Real Time or Step Time (one note at a time), play them back, edit sounds and create a sound library using other software and change from one sound to another in the middle of an automated playback. But you'll only be able to play back one sound at a time on the DX75: the new DX11 being multi-timbral is a better bet but that won't be available (rather cheaper than the DX75 at \$699) until the summer.

Having just bought some MIDI keyboards my funds are having enormous trouble trying to sort out reasonably priced sequencers'.

John Rashman, Gwent

Since you mention the Cheetah and ZXI packages elsewhere in your letter we assume you're using a Spectrum - you'll understand that there's no point recommending the very wonderful Steinberg Pro-16 if you haven't got a Commodore 64 or Michton Super Conductor without an ST for instance. But hardware sequencers are getting cheaper too - Cheetah are just about to launch one as a companion to their drum machine at around £160. Watch this space.



GET INTO CRIME!

In the late 1990's the streets of New York are a jungle. You are the ice cool leader of a gang of drug crazed terrorists. Your main goal is to become the richest, toughest and most notorious gang in the city.

**DARE YOU
PLAY.....**

**FREE
OFFER**



FREE!

SEND YOUR NAME AND ADDRESS TODAY FOR YOUR FREE TRIAL.
IT'S A CRIME THE WORLDS MOST POPULAR PLAY-BY-MAIL GAME.

Write to:—

KJC GAMES, PO BOX 11, CLEVELEYS, BLACKPOOL, LANCs FY5 2UL

TRICKS 'N' TACTICS

In the merry month of May what better than a multitude of maps? Platoon, Terramex, Bard's Tale, you name 'em - we've got 'em, plus much more besides.

BARD'S TALE

This ST map of SKARA BRAE will help anyone who's lost in the game.

ALAN WILSON, Falkirk

P=PORTAL TO
SEWERS 3rd LEVEL

INNS

- 1=SCARLET BARD
- 2=SINISTER INN
- 3=DRAGONBREATH
- 4=DRAUNBLADE
- 5=ARCHMAGE
- 6=ASK Y MOTHER
- 7=SKULL TAVERN

STATUES

- 1=SAMURAI
- 2=GOLEM
- 3=STONE GIANT
- 4=GOLEM
- 5=OGRE LORD
- 6=STONE GIANT
- 7=STONE GIANT
- 8=GREY DRAGON
- 9=OGRE LORD
- 10=OGRE LORD

TEMPLES

- 1=THIEF TEMPLE
- 2=MAD GOO
- 3=GREAT GODS
- 4=GREATER GODS
- 5=GREATEST GODS
- 6=TEMPLES OF KIOSIK
- 7=100BLESSINGS

⌘=TOWER GATES

□=ORDINARY BUILDING

OTHERS

- G=GARTH'S EQUIPMENT SHOP
- A=ADVENTURERS GUILD
- R=REVIEW BOARD
- E=ROSLUES ENERGY EMPORIUM
- S=STABLES
- C=CASTLE OF HARKYN
- K=KYLEARANS TOWER
- M=MANGARS TOWER



SCREAMING WINGS

This cheat should help any ST owners who are having problems with this game

Simply press and hold the left mouse button while you're playing the game and wiggle the mouse until a red box appears in the top left. Now all you have to worry about are the large missiles

JEROME HOPEFULLY, Houghton Conquest.

INSANITY FIGHT

A handy Amiga cheat to advance levels

To proceed to the next level whenever you feel like it simply involves you holding down the two mouse buttons, pressing the joystick fire button and the L key all at once. Easy eh?

TAHIR AHMED, Chesham

FREE SOFTWARE!!!

All you have to do to earn yourself FREE copies of up to SIX of the latest games for your machine is send you maps, tips and pokes to

TRICKS 'N' TACTICS
ACE
4 QUEEN STREET
BATH
BA1 1EJ

This month's 'tip of the month' prize goes to Ian Thomson of Dairies in Scotland for his marvelous *Platoon* map. Ian earns himself copies of *Morpheus*, *Ikari Warriors*, *Professional BMX Simulator*, *Strike Fleet*, *Power at Sea* and *Championship Sprint*. Now that's a prize not to be sneezed at! Paul Knight and Darren Clarke both run away with a copy of *Oids* for their ST's. Alan Wilson and Mark Lawrence, however, win themselves copies of *Dungeon Master* and Martin Duckett gets ATF for his Spectrum. So what are you waiting for? Get to work and earn yourself some software. ♦

BLACK LAMP

For infinite energy for this ST arcade adventure, simply type in the listing, save it, insert the *Black Lamp* disk and RUN. The game should then load as normal.

80 del seg=0
90 for n=&h6a000 to &h6a065 step 2
100 read a poke n a
110 read n
120 cheat-&h6a000
130 call cheat
200 data
&h42a7 &h7e20 &h3907 &h4278 &h8280 &h7001
&h3900
210 data
&h42a7 &h3900 &h42e7 &h42a7 &h4d09 &h0003
&h0000 &h2f0e
220 data

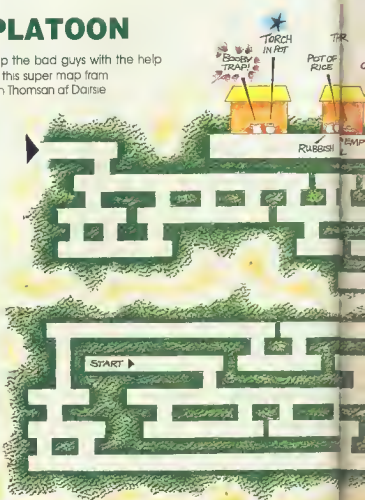


&h393c &h0008 &h4e4e &h3d7c &h6d58 &h0150
&h4119 &h0010
230 data
&h4319 &h0003 &h01b0 &h32d8 &h51c1 &hffc &h
4dd5 &h7000
240 data
&h31c0 &h0b04 &h21c0 &h09dc &h31c0 &h5944
&h21c0 &h594c
250 data
&h203c &h4e71 &h21c0 &h6d5c &h311c &h4e73
&h1aa2
260 data &h31c0 &h122a &h4d00

MARK LAWRENCE, Basildon

PLATOON

Zap the bad guys with the help of this super map from Ian Thomson of Dairies



JET BIKE SIMULATOR

This Code Masters Plus game now has a poke for Spectrum owners that will allow you to qualify for the next race no matter how terribly you ride.

```
10 PRINT AT 10,0,"START TAPE"
20 LOAD "CODE 23296
25 POKE 23372,104
30 POKE 23373,91
40 FOR F=23400 TO 23407
45 READ A:POKE F,A
50 NEXT F
60 DATA 62,201,50,20,106
70 DATA 195,195,92
100 RANDOMIZE USR 23296
```

MARTIN DUCKETT, Ilford.

BACKLASH

If the missiles etc are causing you to come to grief more often than you'd like on your ST, then try this poke.

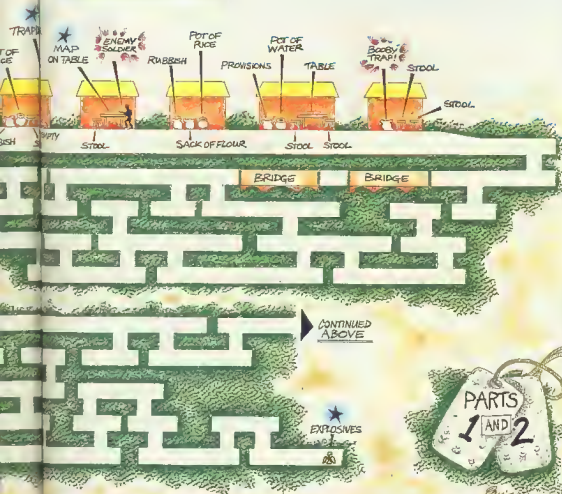
Type in and save the program, then insert Backlash disk and RUN. The program should load and run as usual but you will be graced with infinite lives.

```
80 def seg=0
90 for n=&h6a000 to &h6a045 step 2
100 read a: poke n,a
110 next n
120 cheat=&h6a000
130 call cheat
200 data
&h2f3c &h0007 &h8000 &h3f3c &h0020,&h4e41,
&h4df9 &h0003
```



```
210 data
&h000 &h42a7 &h3f3c &h0001 &h2f0e,&h2f3c,&h
0004 &h0002
220 data
&h4e4d &h411a &h000b &h2d4b &h0084 &h4e46,
&h411a,&h000e
230 data
&h43f9,&h0002,&h70ae,&h2288,&h4ee9,&h015c,
&h4239,&h0000
240 data &h3a3e3,&h4e4b,&h7000
```

MARK LAWRENCE, Basildon



DRILLER

If the tips from Incentive's very own Ian Andrews in ACE Issue 5 weren't enough for you Spectrum owners, then this poke for infinite drilling power and shields will prove invaluable. Simply type in the program, RUN it and load the tape as normal.

5 CLEAR 32767
10 LET T=0. LET W=0

15 FOR F=65000 TO 65029
20 READ A: POKE F,A
25 LET T=T+W*A
30 NEXT F
35 IF T<=7698950 THEN PRINT "ERROR!!".
STOP
40 PRINT "START TAPE"
45 LOAD "CODE 85068"
50 POKE 65108,194
60 RANDOMIZE USR 65000
70 DATA 205,64,254,33,249,253
80 DATA 17,100,255,1,13,0,237
90 DATA 178,195,46,255,175,50
100 DATA 119,168,50,17,193,50
110 DATA 126,191,195,164,151

DAVID MELLISH, Bromley

ENDURO RACER

A nice little cheat for ST owners here.

When you first begin to play *Enduro Racer*, after the countdown type the word CHEAT in on the keyboard. Having typed that in, pressing one of the following keys will result in a specific effect:

- pressing T gives you an extra 10 seconds to complete the race
- pressing S advances you one checkpoint.
- pressing F gives you turbo speed (210 kmh)

DARREN CLARKE,
South Normanton

TERRAMEX

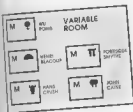
Not only do we bring you a wonderful map of the game, but a complete solution as well (use at your discretion)

GET VACUUM CLEANER R (right R, GET FLUTE USE VACUUM CLEANER, L (left) L, U (up) LAND ON LEFT CLOUD, USE FLUTE L GET LARGE BARREL, D (down), R USE VACUUM CLEANER, U, LAND ON RIGHT CLOUD, GET ACME BRIDGE R GET MANIFESTO, R, GET SILVER LINING R GET UNICYCLE, R, GET UMBRELLA, R, D, L GET CRICKET BALL, DOWN WELL (IF WU PONG GO L L, GET FLASH GUN R R) R, USE BRIDGE, R, USE FLUTE, R, R JUMP ON SPRING, GET BELLows AND SPURS JUMP NEXT TO MONSTER USE FLUTE, DOWN ROPE L L USE FLUTE L USE BRIDGE L, U, R, R R USE BELLows, GET IN BALLOON U LAND ON CLIFF TOP R GET PINS, USE UMBRELLA, D, D, R, GET MEDIUM SIZED BARREL USE LARGE BARREL GET IN CAN

NON USE UMBRELLA, D, (IF KRUSHE GO R, GET BEER BARREL, L, L, USE BEER, WALK INTO MAN) (IF WU PONG USE FLASH L) (IF SMYTH USE CRICKET BALL, L) (IF CAINE USE SPURS L) (IF BEAUCOUPE USE UNICYCLE, L), GET FORMULA R, R GET BEER (IF NOT GOT ALREADY) R, R GET CRYSTAL, L, D, L, L, L GET BATTERY L, JUMP ON TRAMPOLINE, GET LEVER, L, USE UMBRELLA, D, L, GET COAT HANGER, L, USE CRYSTAL, PUT CRYSTAL IN YELLOW BOX USE TRANSPORTER, L, GET ATOMIC PILE USE PINS, R, R USE LEVER PUT LEVER IN SOCKET AT TOP RIGHT OF SCREEN, R, WAIT R, R, R GET BUTLER L, L, JUMP AT LEVER, L, WAIT L, L USE TRANSPORTER, L, D, D, D, R, R, UP LADDER, GET TEA, DOWN LADDER, L, L, UP LADDER, USE SILVER LINING, STAND ON ANVIL, R, U, R USE CROSS R USE FORMULA.

Give the Prof the items as he asks for them and that's it. A flipper now appears that flips the asteroid away from the Earth

PAUL KNIGHT, Cranley.



KEY TO ITEMS

A = UNICYCLE
B = FLASHGUN
C = CRICKET BALL
D = SPURS
E = BEER BARREL
F = UMBRELLA

G = PARTY MANIFESTO
H = BELLows
I = VACUUM CLEANER
J = EXPANDING BRIDGE
K = FLUTE
L = SILVER LINING
M = SECRET FORMULA
N = SWITCH
O = RED BUTTON

P = BATTERY
Q = COAT HANGER
R = ATOMIC PILE
S = ANTI-RADIATION PINS
T = CUP OF TEA
U = ENERGY CRYSTAL
V = SMALL GUNPOWDER
W = LARGE GUNPOWDER
X = MEDIUM SIZED GUNPOWDER



Another insult-packed issue of letters - most of the nastiness stemming from your views on the touchy subject of piracy. We always want to hear original thinking on this subject; but if you're going to insult someone let's just try and keep it relatively clean, sh?

Elsewhere, there's stirring news of Mums playing games, and a long letter full of wisdom from north the border.

Whatever you want to say, just get it down on paper and send it to ACE Letters, 4 Queen Street, Bath, BA1 1EJ. And don't forget to specify which computer you own; you never know - yours just might be one of our Prize Letters.

Mum's the word

I thought I would write in to confirm Logotron's statement about more mature computer players and maybe other readers out there will confirm their statement.

I think Sentinel is still the best 3D game I have nearly 7000 code numbers on XCR I have six screens finished and in Driller I have found 13 locations so far.

I am a mum of 45 years young and spend most of my time on my Commodore 128 as my family are now grown up and I find a computer is far more enjoyable than knitting or sewing or any of the other conventional hobbies that are popular with my age group.

Barbara Hadley
Newport

Well said m'am. We're grateful to see that you like your games as much as the young lads - and we're sure there will be plenty more of the kind of games you like in the coming months.

Singapore sling

Congratulations on a well produced and information packed magazine. I thoroughly enjoyed reading it. The ratings given for software reviews are often fair and honest - unlike some other magazines that are somewhat biased towards the Amstrad machine.

In issue 4 it was mentioned that the vertical and horizontal scrolling on the Amstrad is rough and jerky. I must disagree with you on this point. It should be pointed out that with careful programming the scrolling problem can be overcome. Take for example Transor Super cycle Mission Jupiter, the scrolling is phenomenally smooth on the Amstrad. Really it's all dependent on the programmers - the program can either be in a class of its own on the Amstrad or inferior in comparison to other 8-bit formats.

Keep up the good work. I have faith that ACE will outlast and outlast the other magazines on the market.

David Wong
Singapore

What precisely do you mean by often? Fair and honest? They're always fair and honest. We take your point about the Amstrad scrolling the games you mentioned are all excellent in that respect. But you didn't bother to mention the editors of games that don't come anywhere near that standard.

Load of old Cobol

Could you please help me find a copy of COBOL for the Spectrum 48K. I have been trying to buy a copy for ages but cannot find anyone who produces it for the Spectrum.

Riccardo Hardini
Tucson

We tried to find one as well - but we couldn't. Frankly the Spectra is not the kind of machine that you're likely to find copies of Cobol for. Then there's the point of whether you should bother with Cobol at all. Many computer professionals believe it's an awful language that should be abolished forthwith.

Plaasa plaasa

Guess what it's another one of those letters that hit out your letters page with pleas.

As a dedicated Alan ST user, and I know there are several thousand more out there, I wish to join a User Club. The thing is the closest club to me is 10 miles away. This is okay when you have a car but as I can't afford one I cannot make it to their meetings.

As the Leeds area is lacking a User Club, several friends and I

have decided to try and put one together.

We have, at present, around 12 people definitely interested but we shall need a lot more to make it a viable proposition.

One thing must be pointed out now. This venture will not be for those who intend purely to rip-off software. It is for those who are dedicated to learning how to use their machine to the fullest. We hope to have guest programmers from development houses along to explain the ins and outs of programming and selling software of commercial quality. If it is also possible we will offer a P/D service. As the ST is an excellent music machine (ie MIDI) musicians who use the machine are also welcome. I use my machine for music as well as games and writing these letters. Other ideas will be greatly appreciated.

Anybody who is interested please ring me on (0532) 871329, after 6pm any weekday evening or daytime during the weekend and let me know. If you don't have a phone, write to the address below.

We will organise a meeting (probably at a pub depending on the age of people interested) and take things from there.

Please support this. It can only do you good.

Paul Cosby
4 Station Close, Gerforth
Leeds, LS25 1PT

We're glad to print your letter to get you going. If you want to advertise later on, then why not make use of the Pink Pages small ads?

Amiga quarries

I have owned my Amiga and Monitor for around two/three months since doing so have spent around £65/700 on software, the majority of which is American import. A few questions

ACE LETTERS

*) Can we register our warranty anywhere in the UK (Sierra/Infocom)?

2) Anywhere the help books are available?

Also, I'm thinking of splashing out on a colour printer - which one?

**Matthew Green
Wellford**

You should be able to register any Infocom games with Activision who distribute that software in the UK. Help books aren't widely available in this country, your best bet is to read *The Piggy* or to consult the people offering help on advert runs in our *Pink Pages*. A decent colour printer would be the Atari

LC10 Colour which weighs in at around £300

● Give it a rest

I own an ST. No I haven't got TOS troubles, but that's not a young matter. I think that S Wright and his ST bias? I looker m issue four, is bias I've looked over many magazines since I read this letter especially ACE. In the reviews for ST games there's always a bit in there, some times rivaling the two computers. But it still gets the Amiga on the act.

Anyway, my friend owns an Amiga but we don't argue about which has the best graphics. Now the ST can produce 4096 colours on the screen at the same time

this rules out Wright's boast about the Amiga, but it still has the greater processing power in its blatter. Again the ST has a built in MIDI for great music.

I am trying to keep this a non bias letter unlike Wrights quote. But if you want something really special get an Amiga.

I am really fed up of seeing ST bias, or anti Amiga letters. Why can't people give computer mags a rest? Let's face it, they do try to be fair. Keep up the good work ACE.

**S Clark
New Malden**

A little friendly rivalry doesn't do any harm does it? In fact, if every-

body was perfectly happy, we wouldn't have much to write about would we?

● Extremely confused

I am getting extremely confused please help me. I own an Alan ST FM and I buy several magazines to get information on which software to buy.

When I purchase ACE I often see a review of a game that you thought was very good and I might decide to buy it. I get ??? "cd" and it gives the same game a low mark and it puts me off.

It happens with other magazine as well. I don't know what software to buy any more. I am sure other people are getting the same problem.

**James Mellor
Bedford**

Dear Confused

The answer is simple. ACE is right and all other magazines are wrong. Keep taking the medicine.

● Very rude indeed

I am a new ATN ST owner and was hoping to do some programming. But alas when it arrived there was no information on programming. I did get a booklet on advanced ST basic but that was no good for me because I don't know how to write the simplest ST basic programme anyway. Perhaps you could tell me if there are any books or the like on this subject.

The price of games is really expensive. £20.25 for just one game is just not on. I know you can shop around and buy them for £15 or £16 but still it is very expensive. You do get a really good game generally, but the software companies must get a lot of profit.

Now start to grovel. Last month you reviewed *Black Lamp* by Firebird. You put the game down because of its highly impractical controls. I bought the game last month and I am enjoying it very much. The highly impractical controls are excellent, even with the keyboard. I have never found anything which was inaccessible so perhaps you were not trying hard enough. I think *Black Lamp* should have got at least 9/15. Not a miserly 8/15. Shame on you! I hope I have not been too rude!

**Ben Morris
Monmouth**

Yes you have been too rude but we're used to that kind of thing here. We stand by our review of *Black Lamp*. It definitely wasn't a

Words of wisdom

LETTER OF THE MONTH

I believe that I am older than the majority of your readers and as such have perhaps had a little more time to develop an overview of the pattern of computer sales and perhaps my reflections may be of help to others.

In my youth I became one of the earliest owners of Dragon 32 (an early steam powered computer) because I realised that the punts were right and that this machine with its 6809 chip was to be the standard by which others were judged. How right I was. Everything else seems to have been better than it.

As the years rolled by, it came time for me to stop merely playing with computers and to use them for the purpose for which God intended. Serious playing. Obviously the simple Dragon would not suffice for this strenuous role and so I cast my aged eyes around for a meridian machine to supplant it and I felt that in the Amstrad 6128 I had found such a machine and that this was one which would not quickly become obsolete.

It is now obsolete. Nonetheless my trusty Arnold will not be replaced in the near future. The aged eyes are now slightly jaded and for their own protection many of your readers would be well advised to develop the same outlook at least for a while. The reasons being as follows:

Given the premise that the 16-bit games machine market is in relative infancy, buyers should be cautious about holding their breath and jumping at the first or the cheapest knock knock that comes their way. I cite as an example of this video recorders. Originally there were three main types: re-

V2000, Beta and VHS. The first two are respectively dead and dying. Now only VHS remains. If you think that this does not apply to computers, remind yourself of the Orc Almos, Tatum Einstein, Acorn Atom and Electron, Dragon 32, Aquarius etc etc. The main premise of whether or not to buy a new machine is not how good it is but how long it will last? Only time will tell. There were many perhaps better computers on the market before the IBM PC. But they aren't there now.

Secondly I would suggest that the current boom in 16-bit games software is probably a transient phenomenon. The example that I cite for this is Amstrad software. This sold like hot cakes when the CPCs were introduced, but tailed off to a lower level and now runs very much in the wake of C64 and Spectrum sales reflecting the relative numbers of the machines. I firmly believe that 16-bit games are doing the same. Therefore, either 16-bit buyers are wealthier or they are buying software for their machines because as yet they have very little.

Thirdly any prospective buyer should consider whether or not he or she could afford to upgrade (if possible) or completely replace

any machine if and when the manufacturers replace it. Here any one or a number of cases could be cited but perhaps one need only look so far as the bewildering plethora of ST variants already on the market to wonder how long any one of them will last.

In conclusion I reckon that the 8-bit isn't dead yet. I know that you've heard everyone say that before, but the format is, after all, as said and done, both versatile and more importantly popular. The sheer volume of these computers in the country speaks for itself. There is really a massive amount of software presently on the market. 8-bit owners are not prepared to pay full price for programmes any more because we have all bought a quality program at some time or another and have been most dreadfully disappointed by an unplayable game that soon passed. There is no reason to suppose that 16-bit owners will not do the same in due course. If ST, Amiga and the prospective Amstrad owners are supplied with impeccable software I will be proved wrong, but frankly I doubt it.

**Robert McIntyre
Udny, Aberdeenshire**

Och, ye've had such terrible bad luck that I cannot find it in myself to withhold a prize from ye - I only because of the forbearance with which you turn the other cheek to the blows of fortune. As for hedging your bets on 16-bit, we're convinced that those machines and their software are here to stay. But we don't believe that 8-bit is dead, there's plenty of life in those old dogs yet.

900 game, although it should perhaps have scored a few more points. As to beginners' books on ST Basic, Alan is releasing a new version of their Basic Source Book, which should be available as you read this.

● Librarian

Please could you answer my questions? How would I go about starting my own software hire library? I understand that I would have to get written permission from software companies, but how do I do it? Also, if I then get permission, do I have to pay full price for a game and then give them a percentage of what I make? Please answer my questions as it seems like a good idea and I want to know if it can work. In other words, will I have to pay out a fortune to get it off the ground?

Also, do you know of anyone bringing out a 16-bit magazine? The CBM64 and Specy and the Amstrad have all got magazines all on games, for themselves so why not the ST and Amiga? There sure will be any excuse for no software sure, 'cause all the software houses are backing the 16-bit computers, so come on people give us a games magazine.

Please print this letter as I've written to loads of mags and never had one printed. My last question was: is ACE £1.50 when others are much cheaper? Even so I am sure loads of others think your mag is great.

Jason Allan
Oxton, Birkenhead

Our advice to you is - don't do it. The whole business of whether you can legally hire out software is very tricky. And you have to admit that a lot of borrowers will be most likely to copy the stuff while it's out on loan. As for a 16-bit games magazine, what on earth do you think you're reading? OK, so we give in depth coverage to 8-bit stuff as well, but ACE is second to none in its coverage of the 16-bit entertainment scene. Why does ACE cost £1.50? Because it's printed on glossier, better quality paper because it's full of beautiful colour screen shots, because every month we offer superb prizes and special promotions. Let's face it - the chance of winning an Atari ST or loads of software is pretty attractive.

● Small ad anxiety

My associates and I are attempting to establish an Atari ST user group. We would like to place an advertisement in the new 'pink pages' of your

January 9th 1988. Got ACE today. The February issue's great. The competition is fab and so is the graphics chapter. Just look at the artwork. The 16-bit machine graphics are so skilful. Oh, now I wish I could have an Atari 520 STE/MT Commodore 64 is well out of date. Ideas! Maybe if I enter the Arcade machine competition, I might win. I could then sell it and buy an Atari Fantastu, why didn't I think of this before. Hello, thought you would watch me out. I'm not that dumb. I've already read the whole issue. Tried to fool me by putting the Xerox picture in the Schneider paragraph. This ACE competition is so easy. Just fill in the entry form, stick a stamp on it and pop it in the post. I'm bound to win! I sent the form off straight away. Soon I would have an Atari 520 STE/MT.

After looking at the ACE issue again, I noticed adverts second ideas! I could sell my Commodore 64 by advertising in ACE and then with the money I get and the money I've saved I could afford an Atari. Look! it's free to advertise. I'd better send my advert off quick.

magazine. However, there is an apparent limit of 30 words for user groups but I have noticed that some of the advertisements have exceeded the limit. We feel that we require more than 30 words in our advertisement. We should like to know if this is possible and if so, what is the extra charge?

A J Smalas
Market Weighton

It costs £2.50 to place a 30 word small ad. Or - the small ads super mag (or supreme?) - says that if it's just a few words over there probably won't be any problem. If it gets much bigger, just pay twice £2.50.

● Caning for Commodore

Can you say whether there is or isn't any truth in the rumours of Amstrad releasing an Amiga type home micro? I think that it was released in a store for Commodore, maybe even backlogs! And where would this leave CPC owners, with Alan Sugar's business policies they may end up 'on the rocks'.

Do the manufacturers have to be so hard on each other and

Diary of a satisfied customer

PRIZE LETTER

ly This idea is hopeless. I've advertised my micro in other mags and no one's bought it. Oh well, it's worth a try after all it's free.

Feb 6th 1988 10am Got ACE March issue today. Quick turn to the pink pages. Search the columns for my advert. Ah! There it is. How professional it looks. Mind you, look at other Commodore advertisements, they are much cheaper! I doubt if I'll sell mine now. This is so frustrating. For a whole year I've craved for an Atari ST. Commodore's are now like ZX81's. What am I to do? All my friends have Atari's and I am like an ugly duckling among swans. Every time I see a 16 bit

micro I feel like committing murder.

Feb 6th 1988 5pm Ring ring ring goes the phone. I dash downstairs as fast as my legs can carry me. 'Hello', I say. 'Hello says the repeller. I'm phoning about the Commodore 64 for sale. Great! I gave the phone to my dad to do all the technical stuff. Yes they are buying. Great, fantastu, superb, what can I say? Thanks ACE. Later that day I received two other phone calls about my Commodore.

Now I can afford my long-awaited Atari and I owe it all to ACE. Now ACE is charging £2.50 and I definitely recommend it. My problem is solved. I no longer pace up and down my room but play all night and day on my Atari.

J Williams
Sturford Clys

After this long and enthusiastic tale of enterprise rewarded I guess we've just got to award you a software prize for you to play on that of ST. Remember folks - it's all in the pink Pages.

indeed on us the micro owners.

Are 8-bit micros dying? This is a question on many micro owners' minds. Are they or aren't they? I know now. 16-bit machines wipe them all over the road with great graphics and sound, but will the 8-bit be losing releases to others (16 bits).

Georgia Laird
Loughborough

See our news pages for more on the Amstrad 16 bit rumour. 8-bit micros might not be as healthy as they once were but I wouldn't say they were dying.

● Is heavy metal a killer?

I just want a word on censorship. Many people today think that crime is on the increase and it is due to heavy metal etc. This is utter nonsense, as the crime rate has stayed the same for centuries. It is only that we have more news about it that we think there's more.

We then go about and blame it on films and computer games that depict sex and violence. Computer games as a rule make a player more aggressive but a player must be aggressive in the first place to play them. Games with a lower res-

olution of 320 x 256 or less, would not be uncensored if they are only those that express extreme violence should be uncensored such as Death Wish II and then it should be censored to over twelve. Games with a higher resolution should only be censored if the graphics are good and show mutilation or nakedness and then be given a 15 certificate. Any games that don't come under this category but still show violence should be censored to over twelve.

Companies haven't bothered with it so far but as 16-bit computers get more used, censorship should be imposed due to realism. Most authorities forbid though that computer games are for enjoyment and not for filling our bloodthirsty desires. Thanks for letting me speak my mind.

Petrick Degahm
Nawly, Co Down

Under censorship isn't the exclusive preserve of those who think crime is on the increase.

● Where are the consoles?

First of all I would like to commend you on an excellent magazine. It

of software reviews news and views which all add up to an excellent magazine.

As you are called ACE (Advanced Computer Entertainment) I felt I had to write to you to ask you where the games consoles are in your magazine. Surely, since these are dedicated games machines they should get some coverage of the software available for them. I own a Sega System and buying games for it is rather difficult as I have no chance of seeing them beforehand, so maybe you could review a game or two a month (as I only buy one game a month or so) so that people like myself can get the best software for our games system and give the world ones a miss (as £15 - £20 is a lot to pay for a game that will only appeal for a few days).

I do think that the system does deserve some coverage even if the number of games titles is relatively small at the moment so how about it?

Jon Healy
Exmouth

Jon - we've never neglected the consoles but there hasn't been much fresh stuff around to review. We do have Sega reviews in our last issue. To make sure you don't miss console software reviews in future, we're pointing them out more clearly on the Screen Test intro page.

● Nosedive

First I would like to say, that I have been a devoted ACE fan, and your mag is so good I don't read anything else. Good mag, brilliant mag, sorry crawling again.

For the attention of ACE readers and ST users: I have just bought that simulator that all mags rate to be good - including ACE - Flight Simulator 2, by Sublogic. Great! can't wait to get home and get up with the birds in the clouds! But horror what shock, what dismay, what c****.

Yes, for just £49.95 you can fly in boring scenes with poor graphics and read a 132 page hand book, that you need a degree in aviation or map reading to understand how to get from one place to another.

Yes I know it's not a game, but for £49.95 you would at least expect to get your 49.95 pounds worth!

All the airports look the same apart from the odd mountain, that when you fly over it, it looks as flat as a pancake on shrove Tuesday. Graphics wise I gave Flight Simulator 2.4 out of 10.

● Piratical rubbish

In reply to the 'Reluctant Pirate' I feel I must point out that he is talking my rubbish.

There is absolutely no excuse for Piracy, greed can be your only motive. There are probably plenty of pirates who complain about the amount of unemployment. Don't they realise that their actions, on any scale, are just as likely to make the situation as bad if not worse than any government?

Remember when the Spooky was the computer, there were hundreds of software houses. Where are they now? Obviously not all of them were pulled out of business by pirates. Some were due to bad management or even just bad games. But piracy will have been a major contribution to many companies demise.

I know that three or four unemployed on top of three million does not seem like much, but tell that to your - and I use the word advisedly - victims. I know that I didn't enjoy my spell of unemployment.

I, too, have spent a large sum of money on my computer, a 520ST, and I am also a marvellous games player but I will not touch pirated software even when offered at extremely low prices.

As an example I have been waiting for Out Run and Gunship since before Christmas, but like thousands of others I will be patient, and hopefully as with other delayed releases the game will more than make up for any

The sound is not too hot as well - try crashing - just a 'DING' sort of sound where are the other planes or trees, or buildings? I did not know that this earth of ours is flat. I thought it was round, but just try flight sim - everything is flat the whole boring thing is flat.

Just try the thrilling World War 1 Ace. Sell your sights on the spaghetti flying enemy, shoot your guns - no sound? No explosions when you drop the bombs that you can't even see, yes all in all I must be in a silent movie.

Now as you can see I am very disappointed and so I should be, but should I? Am I expecting too much from my ST or is it that software programmers are taking the mucky money? And I say again for £49.95 DO YOU THINK I AM MOANING??

K.J. Brady
London

Piracy again

amount of the time spent traveling to my local retailer.

My last word on this subject is: There is no excuse for piracy.

David Peaton
Glasgow

● Piratical cobbler

After reading the letter to Doley a thief? by Ian Cracknell in your March issue I finally snapped. Sorry Ian, but I am who's the plonker, not A Doley. I'm sick and tired of being branded a thief just because I copy games for friends and of people who condemn others like me in general. So A Doley is spoiling the software industry as we know it eh? Total cobbler!

The music business, hasn't collapsed yet and I am sure more people copy audio tapes and records than they do computer software. Everyone must have done it at some time (yes even you, Ian Cracknell) and anyone who says they haven't is a liar. Obviously the con men who pirate games on a large scale are doing wrong (this happens in the music biz as well) but people like me are doing no harm whatsoever.

So all the people like Ian Cracknell who keep having a go at us, please just get off and do!

Roland Turner
Chertsey

Is it just a question of scale? Is whether something is right or

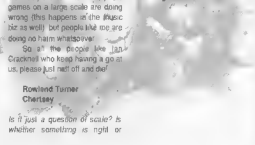
wrong merely a question of how much you do it?

● Mad bomber

While reading last month's letter page I was supposed to find the letter from the reluctant pirate. It said just what I wanted to I read it through agreeing with more or less everything. Then I read your reply, I couldn't believe what you were saying so I planned to bomb the place. Then I thought I couldn't agree as you are a mag and everything would fall on you like a ton of bricks so I wrote a letter instead. Here is another tip for the companies - do not release reproduction copies. My Gamson has the men all the same but the game's the same. On Pmbail Wz and I cannot save my score - but so what?

Anyway companies - it really is that bad I cannot see how you keep in production as everyone I have copied copies.

Vege



Yes, we think you're moaning. Perhaps your problem is that you're just not the flight simulator kind of person. Many of these people exist, and they take no pleasure in

the detailed mechanics of flight, and keep away from software which simulates it. It's just a pity that you bought the most expensive one around.



What a month! the Cowled Crusader casts his eye over Infocom's latest offering, checks out a new release from the company that will soon be bringing you *Dungeons and Dragons*, and checks out a new competitor to *The Bard's Tale*. All that PLUS Shades Diary, Pat's Patch, and No Problem! Go for it, wanderers...

SHERLOCK HOLMES

The Riddle of the Crown Jewels

Return to tradition with INFOCOM

DURING the last few months we've seen many different game-styles coming out of the Infocom stable. We've also seen more products than ever before in such a short space of time. One of these has been excellent - *Beyond Zork* - but the others have all had their weak points and suffered in the ratings accordingly.

Flundered Hearts - great new genre but too easy. *NorthBert* - highly original and occasionally very funny but just a bit too quirky for most British adventures. Finally, Infocom's which haven't been released over here yet (if they ever will be) - a very disappointing move away from adventure into a pseudo-comic-book budget market.

Now we get Sherlock and bless my heart if there isn't anything new about it at all (except on-line hints which we've already had in *NorthBert*). It's a reasonable text-only adventure, not one of Infocom's best by any means but still very challenging in parts. But is that enough? The problem is that the previous releases have raised expectations either (recently) of innovation or (in the older classic Infocom games) of monstrously high quality. *Sherlock* doesn't seem to have either.

The plot is straight forward enough. As

Doctor Watson, you must locate the missing Crown Jewels stolen from the Tower of London. The game begins at 5.00am on a Saturday morning and you must retrieve the booty by Monday. It's not easy.

First, your friend Sherlock is of very little help. He simply follows you around throughout most of the game, mumbling to himself. This is tough, because some of the puzzles could do with the personal attention of the great detective. You'll find yourself reviving dying flower-girls - give them the wrong pill and the games up, retrieving vanous isolated bangles from cliff-cult spots - one of the jewels, for example, is stuck to the clapper of Big Ben, and getting past officious guardians of Madame Tussauds the Tower of London, and so on.

The game takes place on a relatively small map featuring locations in 19th century London, though there are one or two anomalies. My colleague the White Wizard, who's been around a bit longer than I have, assures me that even in the 19th century you could walk eastwards along Euston Road. Furthermore, there's a definite emphasis on well-known tourist landmarks that marks the program as the product of an American software house for an American public.

What's missing from the program, however, is any really inventive interaction with computer-controlled characters. You can try kissing Mrs Hudson, with vaguely amusing results, but there's nothing along the lines of, say, the intelligent droids in *Star Trek* or the party guests in *Suspect*. This, combined with a map that will appeal more to the Yanks than to those of us who've seen most of it before, weakens the game and fails to compensate for the strong and undeniably intriguing puzzles.



PILLGRIM

So not exactly elementary, my dear Pugs, but nor is this one of Infocom's more advanced productions. There's no doubt that, with other companies coming onto the market with some very strong products, some reappraisal of Infocom's position as number one is required. Their recent games have pointed out some new directions, but *Sherlock* doesn't really point the way forward to any of them. Judgement, therefore, is temporarily suspended.

SYSTEM 91 ENCOUNTERS 88
CHALLENGE 88 LANDSCAPE 84
ACE RATING 899

RELEASE BOX

C64/128	£19.95	OUT NOW
IBM PC	£24.95	OUT NOW
ATARI ST	£24.95	IMMINENT
AMIGA	£24.95	IMMINENT

MIGHT AND MAGIC

Rapid-fire role-play from ACTIVISION

ACTIVISION UK are really knocking out the products these days. They seem to have an inexhaustible supply of games from Infocom (who they own) and Sierra-on-Line and now they've added New World Computing introduced with this Bard's Tale look-alike fantasy role-playing game.

At first sight M&M seems distinctly inferior to Bard's Tale and especially to Bard's Tale 2 which we reviewed last month. The graphics are noticeably poorer, as is the atmosphere generated by the text (what there is) and the documentation. The scenario is very similar - the scrolling graphics window shows the view in four directions as you make your way through five different towns plus assorted dungeons, forests and other monster-infested areas.

RELEASE BOX

C64/128	£24.99uk	OUT NOW
IBM PC	£24.99uk	OUT NOW
No other versions planned		



Like a good M&M, Not as pretty as Bard's Tale, but it has better combat routines

Where M&M scores however is in its user interface and in the combat system. Although the game features fewer character types than Bard's Tale it enables you to get more out of them by including rapidly executable options during combat that permit changing the order of battle and concentrating your attack on particular members of the enemy.

In some ways however gameplay becomes rather too easy at first, since you

can often retreat (which snaps you back to your start location) or rest (and completely recover) without penalty. Later in the game these options become slightly less accessible but are still there to get you out of tight spots. There are a large number of spells to cast and novice players will find that they can cause quite a bit of damage even at Level 1, unlike the Bard's Tale which doesn't give you much scoreless strength until you've risen to the next level of experience. However the more advanced spells are less imaginative than their Bard's Tale equivalent, being simply (for the most part) more powerful versions of their lower-level equivalents.

Good points therefore are rapid gameplay as the system is a twofold improved combat system that actually promotes tactical thinking, and a number of games within games as other characters set you different tasks to accomplish.

On the minus side the presentation on screen isn't as good as Bard's Tale and a magic user's existence at the higher levels is not nearly so interesting. The verdict must be that those who like flashy graphics and unusual spells will prefer Bard's Tale; those who want an easier life at the lower levels and better combat routines should try out M&M.

SYSTEM 88 ENCOUNTERS 78
CHALLENGE 87 LANDSCAPE 79
ACE RATING 825

QUESTRON II

Ultima-style gameplay from SSI

THIS new release is significant because it comes from the same company that later this year are to bring us *Advanced Dungeons and Dragons*. Looking at *Questron II* may give us an idea of their potential.

The program is pretty run-of-the-mill in design. It's similar to the *Ultima* series in concept, with an overhead view of a landscape across which you manoeuvre a small figure with the joystick. Every so often monsters appear with whom you do battle in return for treasure and at the expense of your limited supply of hit points.

Also on the map are towns, cathedrals, tombs and castles, as well as the usual dungeons displayed in head-on perspective as in Bard's Tale. *Dungeon Master* and others



QUESTRON II: the mystical world of Lander, viewed from above

Placing your figure on top of the representative symbols for these features and then selecting an enter option changes the display accordingly with towns and cathedrals also shown from overhead. Your ultimate objective is to defeat the creators of the Evil Book of Magic (which ironically helps you in your quest) and get rich in the process.

There have been quite a few programs

like this on the market - Wintersoft's *Ring of Darkness* was one of the first and despite its crude graphics it's slightly sobering to realise that *Questron II* doesn't offer an awful lot more. You only get four different spells and a single persona to move around (no partying in this game) and combat routines are a sim-

ple cut and thrust affair with each side taking a swipe at the other and either hitting or missing.

The obvious comparison must be with the *Ultima* games which offer more detailed maps, more magic and in general far more features throughout the game. However in the dungeon sequences *Questron II* does have some superb graphics (together with on-screen mapping) and is also very easy to play throughout, relying totally on rapid joystick selection and implementation of the various options.

If you want to try out this game genre without tackling anything too complex then the game is recommended otherwise stick with its nearer competitors.

SYSTEM 79 ENCOUNTERS 80
CHALLENGE 88 LANDSCAPE 78
ACE RATING 819

SHADES DIARY

No time for pacifism this month as Sappho the Witch tells how Britain's largest multi-user on-line game copes with the introduction of a new feature – the Fighting Skill attribute. Contact her on MBX 019998149.

When someone mentions gossip they refer to who is 'bonking' who, when and where but it seems that everyone has done everything to everyone else already.

Actually what has really happened is that there has been yet another change to the game. So everyone is too busy arguing about that to worry about those intimate moments in the *Final Suite* (aka the BS where folks play mummies and daddies).

This latest addition to *Shades* revolves around changes to the light system and the introduction of Fight Skill (FS). All players start with a base of 1000 skill points and this is then altered by their ability to kill other players. The point of FS is that as your skill increases so does your ability to fight better or so the theory goes.

The resultant debate is very long winded

with one off-shoot of the debate coming to the fore. Immortality is seen as the acme of achievement – ie being able to collect 2000 points and then keep them from a gaggle of frustrated longswordsmen waiting to impale you on their weapon (Of I said I wasn't going to talk about the *Brutal Suite*). So should wholesale mass murder be allowed?

Some argue that they should have the choice of being peaceful non-killing characters that can't be attacked whilst others say that it is all part of the game, as essential as collecting T (treasure) and solving puzzles.

It would be nice to report that the debate had been settled once and for all. We could then inform His Majesty's Government that the problems of mankind were solved and all live happily ever after. Unfortunately, this conflict between the supporters of action and

ATTENTION PLEASE

If you've ever wondered what it's like taking part in an on-line game with dozens of other human players, then wonder no more. Next month, ACE will bring you a special feature on on-line MUGs in which Sappho will give you everything you need to know about this exciting area of computer entertainment.

The games, the players, the quests, and all the details you need to log on will all be there. Don't miss it!

the supporters of pacifism is unlikely to be settled in a hurry.

My own view is that being peaceful doesn't mean that you can't or shouldn't learn to defend yourself. Surely part of the whole adventure is about being able to cope with all contingencies, violent ones included? Sappho would never attack but that never stopped her grabbing an assassin's weapon and returning it, pointy end first.

My favourite weapon? The cabbage.

> You are being battered by a cabbage leaf. You like it so much that you beg for more, completely failing to see the rusty longsword being inserted into the lower portion of your elementary canal. You'll never be able to walk properly again.

Then again, if that doesn't appeal, you could always scream pitifully and show a clean pair of heels.

NO PROBLEM!

All glory, praise and adoration is due to these valiant adventurers who have asked life, limb, and a link to the nearest postbox to deliver these timely tips for other players. The month, the Pilgrim confers honorary Pilgrim status upon Raymond Tennant, Ian Gay, A.J. Donovan, R. Marshall.

To send in your own bid for immortality, fit your clues clearly on a postcard and post it to The Pilgrim, 4 Queen Street Bath, BA1 1EJ.

Bored of the Range

Riders – play hide and don't seek.

Borrowed Time

Spy a meeting in doctor's to stop a fight at the cat park.

Buffy Moo

A fancy dress party the meeting is not – but it could get you quite a lot. Lions that cause trouble need a whipping, but don't be a stool.

Stal cross

Red and yellow could save your hide – in the repair room they will slide.

Stationfell

Plato is a problem concerning a diod, so maybe you could use Floyd. Mirror, mirror on the wall, is there any platinum to be found at all?

What was once hot can help with the cold problem of explosives.

Planetfall

Microbes fall for hot lasers.

Let Floyd do the dirty work in the bochambers.

Wienburger

A stone in the head is better than a hole in the head.

Keryssa – Queen of Diamonds

The password to part 2 is ORLA. Say Cynthia Ostrane to stop hawk attacking. Examine tree, open door, and go free. Then down and then north. Say to Hermit, 'Hello'. Drop skullcham on to pentacle and it will turn into a pair of doubleswords.

Kenilille

Need to enter the castle? Reunite Temate with Dragon Zelda and help will be at hand.

Kobyashi Maru

To get the solance, activate it and pull, to get out of the pit, climb on the wall.

Zzzz...

To catch the bus, raise sign, then raise hand. To get past the crocodile step on it.

Rigel's Revenge

Lost in the desert? Retrace your steps. To get a uniform from the bungalow throw some rubble at the security light.

Redhawk

Give the vase to the curator. The wellies will save you from a shock. Techno can be defeated with the magnet.

Beyond Zork

Sell Michael and Fireworks – both useless. Sell valuable objects – Turk, crown, doublet, jewel etc. Buy a rabbit lool and rub it to earn luck. To get the max, erase snow flacks (to earn compassion) and wait for the hunter to pass by. Kiss the Unicorn horn for luck and then levitate unicorn and saddle (to earn compassion). Say lightning to rockface to gain access to light-house.

BRAVE NEW WORLDS

Wot no Ultima reviews? Where are they Pigmen persons??

My apologies fellow Pigs but don't despair - we have good reason for our actions!

First we received two more new fantasies this month (Question II and Might n Magic) which, being new releases, needed the space we had set aside for the Ultima games. Second, despite the original release schedules, the new Ultima V adventure is still not available and it seemed sad to cover the series without being able to look at the latest and probably the greatest of them all. We live in hope for next month.

Every dark cloud has a silver lining however. The big deal. Piggings is that we are planning to make this section even BIGGER and BETTER from now on, so that we won't suffer so badly from space problems in the future. It's no coincidence that we

received two new fantasy role-playing games in one month - the market is growing very rapidly and the new 16-bit machines are ideally suited to this kind of software. We've therefore decided to EXPAND the size of this section, covering areas of science fiction, fantasy, interactive fiction, cave dwelling, and spell casting. No doubt about it, it's going to be a winner!

AND we want YOU to help us. We're not going to thrust this new section upon you - we want you to tell us what you want and how you want it. To this end, we'll be printing in the magazine next month a special questionnaire. There'll be a special prize draw for those sending it in, with some fantastic adventure software up for grabs. Don't miss it, or you'll miss out on your chance of shaping the future of the country's bravest new world.

IN BRIEF

Beyond Zork is definitely the test game where you're on Cloud 9 for ages. When you search the treasure at the end of the game to find the Coconut (Farlander), you then get the best ending I've seen to an adventure game, bearing Trinitry. There's a real feeling of satisfaction when you press anykey to exit - no loading. Rob Marshall, Congleton

Yeah, BZ is a scorcher. Did you know that role-playing is now the largest growth area on the States' adventure scene? It's success is bound to influence other, more traditional adventure software houses.

Whilst the Pigmen may consider D&D to be the role-playing game par excellence, I have a different opinion. It's rather a limited game in that the only way players can gain experience points is through combat. This can be damaging to the game, with players acting totally out of character to go up a level.

Other games that do not have these restrictions placed upon them are far better. Two of these are *Warhammer Fantasy Roleplay* and *Stormbringer*. They both use different systems of advancement, which produce characters shaped more by the player and less by roleplay.

WFRP, for example, uses a system of career advancement to allow the player to progress from an apprentice level to mastery, as in real life this doesn't happen overnight and does require experience, but these are given more for good roleplaying than combat skills. The character can change career and doesn't have to stick to a generic class such as MAGIC USER, but can specialise and become, say, an ELEMENTALIST or any other of countless types, but the character is modelled by the player, and this makes the player feel he knows the character, encouraging better role-playing. The system used by *Stormbringer*, although different, has similar advantages.

D&D players may disagree with what I've said about the game, but before they criticise I think they should try the systems I have mentioned - they will find them infinitely better. Simon Felton, Kestlingbury

Thanks for these interesting points, Simon. Actually, I am well aware of the games you mention, but didn't include them in the article, since it was primarily about computer games. I used D&D as an illustration simply because it is well known amongst non-role players. We should also give it credit for its role in raising public interest in role-playing games in general.

PAT'S PATCH

Adventures often contain non-player characters and usually they're as static as the scenery. To add a bit of spice to your game, why not have dangerous characters patrolling the playing area on a regular beat which the player must work out in order to avoid danger?

The following GAC routine does just that and works by using an object (no. 50) as a character and moving that object from room to room as the game progresses. Also needed is a counter (we'll use counter 100), a marker (marker 100) to check the progress of the character and a set of rooms, say 4 to 8 inclusive, where the character can be. We'll start the character off in room 4, send it through rooms 5, 6, 7 and 8 then turn round and come back again, and again, and again.

- Line 1 loads counter 100 with the character's start room and marker 100 shows the direction of travel. This should go in your initialisation line unless the patrol begins after another event (a door opened or an alarm set off perhaps) - then make line 1 part of the action for that event instead.
- Line 2 is acted on if the character is going up the room numbers but not at the end yet.
- Line 3 is done when the character reaches the highest numbered room on its beat. It resets the marker to show the direction of movement has changed and reduces counter 100.
- Line 4 is the reverse of line 2 and line 5 the reverse of line 3.
- Line 6 simply looks up the number in counter 100, treats this as the new location of the character object, and moves the object to it.

There's nothing to stop you having several characters in your game each with separate or possibly intersecting beats. In fact you could create an interesting maze situation and make the player avoid a whole host of enemies with different patterns of movement in the same area. You could even have characters interacting with each other if they meet the player controlling the time they start their patrols.

INITIALISATION LINE (part of it)

```
1) 1 CSET 1, 0 SET 100
```

HIGH PRIORITY

```
2) 1 CTR 100 - 4 AND 767
  100 CTR 100 AND going down
  3) 100 CTR 100 - 8 AND 577 100
  1000 RESP 100 END (about room 4)
  4) 100 CTR 100 - 4 AND 577 100
  1000 RESP 100 END (about room 8)
  5) 100 CTR 100 - 4 AND 577 100
  1000 RESP 100 END (about room 4)
  6) 50 100 CTR 100 END (put character object at room [ctr] 1001)
```

ACE PINK PAGES

Want to know the best games to run on your micro? Want all the facts and figures on the latest hardware? Look no further - it's all in the Ace Pink Pages. You'll also find our regular Reader to Reader section, plus this month's brain-teasers in the Random Access pages.

ACE RECOMMENDED SOFTWARE

ARCADE ADVENTURES

These games usually give the player a joystick controlled character with which to explore the huge game area.

AIRBALL

Modeler • Alan ST £24.95dk

Multi-colored three-dimensional arcade adventure that takes something to the ultimate style but is years ahead in terms of graphic detail and presentation. You as the airball in question must negotiate corridors and rooms full of various obstacles - all spelling instant death. An outstanding rendition of a popular game.

DUNGEON MASTER

Modeler • Alan ST £24.95dk

The following arcade adventure dumple playing game is the sort of thing your BT was made for. Check out the main review on page 54.

EAGLE'S NEST

Modeler • Amiga £19.95dk • Alan ST £19.95dk

This is one of the better Gauntlet clones especially on the 16-bit machines. The

military flavour of the arcade adventure adds atmosphere and if you like the particular style of game you won't be disappointed with *Eagle's Nest*.

HEAD OVER HEELS

Cosien • Spectrum £7.95cs • C64 £8.95cs • £12.95dk • Amstrad £8.95cs • £14.95dk • MSX £8.95cs • IBM PC £19.95dk

3D exploration reaches its peak with this huge intricate masterpiece. You play two characters - Head and Heels - as you search for the crowns that will free the galaxy. The puzzles can get very difficult indeed and you'll often have to split Head and Heels up to use their different capabilities. The game's 300 locations are wittily drawn and the animation is excellent throughout. A real classic.

MAGIC KNIGHT TRILOGY

Mastertronic • Knight Tyme Spectrum

£2.95cs Amstrad £2.95cs • Spellbound Spectrum £2.95cs Amstrad £2.95cs C64 £2.95cs • Stormbringer Spectrum

£2.95cs Amstrad £2.95cs
This trilogy is a series of menu-driven arcade adventures which as well as all the expected running and jumping have a complex system of interaction between characters. In *Spellbound* you must rescue Gombal the Wizard from the fear

some Castle of Kern in *Knight Tyme* you have to find a way back in time after being catapulted into the 25th century while in *Stormbringer* the final part we find that the magic knight has been split in two one part good the other evil. You can't kill yourself, so the only solution is to merge the two halves. But how? Lots of action plenty of thought and good graphics make all three winners.

SIMULATIONS

Games that put you at the controls. Whether you're flying helicopters or aeroplanes, or steering bobsleighs, simulation games can become very involving.

BDBSLEIGH

Digital Integration • Spectrum £9.95cs • Amstrad £9.95cs £14.95dk

Bobsleigh is a highly competent and addictive simulation with more than a little strategy. Have you got the stamina to finish in the top three by the end of the season? Remember, sponsors don't back losers. Bobsleigh is available for the C64, but it's a poor game compared to the Amstrad and Spectrum versions.

CHUCK YEAGER'S ADVANCED FLIGHT TRAINER

Electronic Arts • C64 £9.95cs £16.95dk • PC £24.95dk

Chuck Yeager's flight trainer takes the flight simulator game a step further by including a training option. Chuck will guide the novice through such difficult moves as aileron loops and rolls. With so

PUZZLES

If you're after a game that will provide you with a real challenge without necessarily requiring large doses of strategic thinking, then it's a puzzle game you want.

BONECRUNCHER

Superior Software ● C64 £39.95cs
£11.95dk ● Amiga £14.95dk

At first sight this recent release may appear to be nothing more than a Soulcrusher rip off. However there are a number of highly innovative gameplay features which give Bonecrusher a feel all of its own. Highly recommended for those who prefer to solve problems rather than shoot them.



■ BOULDERDASH

Prem Leisure Corporation • Spectrum
£2.98cs • CS4 £2.99cs • Amstrad
£2.99cs

A game that has everything – instant addiction, long-term challenge, frenetic movement as the clock ticks down and extremely tricky puzzles. Collect jewels hidden in crevices, digging away earth and boulders to get at them. Boulders can drop and cause you serious damage while the jewels are often hidden by seemingly impenetrable walls. Complex, but great fun. Boulderdash is a classic you can't afford to miss in budget form.

DEFLEKTOR

Gremlin/Vortex ● Spectrum E7 99cs ●
C64 E9 99cs 14 99dk ● Alan ST
E19 99dk

Juggle optics (not the spirit dispensers) as you try to connect a laser beam to a receiver and at the same time destroy a series of cells on-screen. You'll need to make full use of the mirrors, fibre-optic conduits and polarising and refracting blocks. Clear the first screen and you'll

only have 58 more to do Forecasting
stuff that's horribly addictive

NEBULUS

Hewlett ● C64 E8 95cs E12 95dk ●
Spectrum E7 95cs

Guide pogo is the top of eight towers using the spiral of platforms, lites and ledges that form the route. It's a highly original game game that strikes a fine balance between frustration and addiction. Add the rotary scroll, and you have a good-looking, playable winner.

SENTINEL

Firebird • Spectrum £29.95cs • C64 £29.95cs £14.95d • Amstrad £29.95cs £14.95d • Alan ST £19.95d

Bizans: yet compelling strategy game played over the chequered surface of a planet dominated by the Sentinel. Funds: mainly you have to absorb energy while stopping the Sentinel from absorbing yours. You need a clear brain and fast trigger finger for this very original and large (10,000 possible landscapes) game.

SKULLDIGGERY

News • Alan ST 219 95

Boulderdash clone that completely outdoes the original on this machine. Again (see Boulderdash above) you're digging for diamonds in caverns over 100 different screens - with a time limit for each screen. Skulldiggers scores on playability (easier screens to be on with and a

choice of starting point) and its entertaining two-player option.

SPORE

Bulldog ● C84 £1 99cs ● Amrad
£1 99cs ● SpectrumCl 99cs

The winning combination of strategy frenzied blasting and great graphics make *Spore* a worthy full-price release, what a bargain then to be able to pick it up for £1.99!

TETRIS

Memorex • Spectrum £8 99cs £10 99dk
• C64 £8 99cs £12 99dk • Amstrad
£8 99cs £12 99dk • Alan ST £18 99dk
• Amiga £18 99dk • IBM PC £12 99dk.

A fascinating geometrical oddity, the Russian puzzler turns the obscure mathematically topic of packing into a cult game. One at a time shapes fall downwards into a rectangular playing area. Left to their own devices they'll pile up until they reach the top of the screen; your task is to guide them down and pack them in tightly so that doesn't happen. Different versions have proved to be rather variable in their arcade aspects, but the brilliantly simple idea behind them means they're well worth a look whatever your machine.

THINK!

Firebird • Spectrum £1.99cs • C&A
£1.99cs • Amstrad £1.99cs

MEGASAVE FANTASTIC SAVINGS[illegible]

Mail order only. Postage included Great Britain. EEC 73P per item. Overseas add £1.00 per item.

Send cheque/PO to: **MegaSave, Dept AC, 49H Sutherland Street,**
Montreal, Quebec H3C 2V2

Victoria, London SW1 V4JX
Send for free list of contributions. Annual £18.50 inc. pmt.

SUNARO

SAVE C's WITH OUR NEW LOW PRICES

Established during 1984 SINABO are proud of their dedicated STAFF

WHY NOT GIVE US A TRY?

	ATARI ST	ATARI ST	ATARI ST	ATARI ST
Battlefishes				11.95
Black Lamp				15.95
Crazy Cars				15.95
Dark Castle				19.95
Dungeon Master				19.95
Enduro Racer				11.95
Gunship				19.95
Pool				8.95
Predator				15.95
Ohl				15.95
Sky				11.95
Star Trek				15.95
Star Wars				15.95
Tau Ceti				15.95
Test Drive				19.95
Tetris				15.95
Wizard				15.95

NEW TITLES AVAILABLE ON RELEASE

Cheque/PO to:

SUNARO SOFTWARE (ACE)

PO Box 78, Macclesfield, Cheshire, SK10 3PF

Telephone (0625) 25228 · Microlink MAG 96023



Castle Computers

SALE

SPECIAL SPECIAL OFFERS

Ammy Carr	0.80
Predator	0.80
Best man 120K only	0.80
Rolling Thunder	0.80
Good Valley	0.80
Pisaton	0.75
Reborn School	0.75
Reborn	0.75
March 1	0.25
Magnificent 7	0.88
Outrun	0.80
Thunderbolt	0.80
Rustin	0.25
Geopark	0.80
Nguyen M. Grand Prix	0.95
Indian Jones	0.95
Football Director	0.95
Vulcan	0.95
Blitzkrieg	0.95
Napoleon at War	0.95
Gallop	0.95
Gallop 1	0.95
Scalene	0.95
Pisaton	0.95
Bugby 1971	0.95
720°	0.50
Age 2	0.50
Super Hing On	0.75
Super Hing On	0.75
Terminator	0.50

SALE

SPECTRUM SPECIAL OFFER

[illegible]

SALE

SPECTRUM SPECIAL OFFERS

ABCs of Yacht	1.99
Bugsy	1.99
Big Sleaze	2.99
Chico	2.00
Force Four	2.99
Clayton's Small	2.99
Who Are the Champions	5.99
Yas Prime Minister	2.99
Saltine	2.99
Aut. Michelson Monty	2.99
Doomsday Revenge	2.99
Mystery of the Nile	2.99
Up to Contractors	2.99
Daniels	2.99
Phantom of the Opera	2.99
Heartland	2.99
Hive	2.99
Champion Baseball	2.99
P215 Trading Co.	1.99
Dead Top Management	2.99
They Broke a Million	2.99
Hawman 4 Smash Hits	5.99
The Geomorphs	1.99
Stainless Steel	1.99
Knockout Rules	1.99
Shreddy Sister	1.99
Jason 12 The Wood	1.99
Kinetic	1.99
Gymn	1.99

SALE

2014 SPECIAL OFFERS

[illegible]

SALE

C&M SPECIAL OFFERS

ident ..
ucker ..
18 Trading Co.
y Minister
ary Monsie
to Ruders T
argh ..
agers In The Snow
n Bounce Back
1st Wizard
ckford's Hot
to Adorn It ..
News ..
The Tiles
and Led ..
ever & Smart
y Spy Art Antics
a Guest For Tyne
ght Night
ambassadors
loyal ..
ampionship Baseball
ampionship Basketball
uld ..
uld II: Enlightenment
ong Fu Master
ysics II
yberish ..
and of our 100 names
the Slice

SALE

CMA SPECIAL OFFERS

... ..	2
Game	2
Trouble Little China	2
Are The Champions	2
Travel	2
Of Yessid	2
Of The West	2
ies of Midnight	2
ic	2
len	2
ling Of Goblins	2
esses The Warlock	2
rail	2
VKings	2
er Pear	2
n City	2
Terque	2
Sail	2
Smash Hits	2
ity	2
bruary 1985	2
Apocalypse	2
s 6	2
otne Rd	2
overBoard Exec	2
ries final Challenge	2
Quadrant	2

SALE

GM DISC OFFER

[illegible]

SALE

AMSTRAD SPECIAL OFFERS

Big Push	3.96
Shant	2.96
Stig	1.96
Big Trouble L. China	1.96
Yas Prime Mini Rev	2.96
Yas Prime W. Vessaro	2.96
Alkaline U. Mission	2.96
Red Lad	2.88
Glover & Smart	2.88
GF Garmeter Baseball	2.88
Warbox	1.88
Lungfish T.1 Prearms	1.88
Mug Man	1.88
Hot	1.88
GFL Football	3.88
Knot Runners	1.88
N. Manasse G. Prie	-0.80
Mystery Of The Nile	-2.80
Platform	6.70
President	1.70
Jack N. Nappa B.	1.70
Death With T.	2.70
Musk I.	2.70
Target Renegade	6.50
Ten Oreal	0.50
Spy V. V. Spy Arctic	2.50
Spy V. V. Spy Anti Capet	2.50
Packden	6.50
Chick	6.50
Creative School	6.50

SALE

LAMB DRESS OFFERS

... ..	2.8
... ..	2.9
... ..	4
Circuit	4
Leo	4
er & Smart	4
back Adventure	3
Mate	3
on 29	4.3
Comp People	6
gun	6
Trauze in L.China	4
E Bros	4
embusmen	4
restor Football	4
athan	4
Gaches (#128)	2
protocol	3
ious	2
ringlife	4
roll	4
ortland	4
ario	7
Voice Gases	7
rock	4
Spy I Caper	4
phone for any Ameri	
Garnes not Belad	

SALE

★ ★ ★ ★ ★ ST SPECIALS

George Maitler
 Dave Ouellet
 Jeff O'Connell
 John Garrett
 John Blake
 Dick Giggery
 Jack Lamp
 Interior
 Radio/Record
 The Wheel
 STC Macro Assembler
 STC C Compiler
 Drive
 Leather Necktie
 M T
 Iron
 Antennas
 Ball Wars
 Universal Mill Sim
 Senior Command
 Friendship
 Iron
 Sinker
 Bobbie Bobbie
 Necktie
 Antennas
 Quantum Paint Ball
 Antennas
 Sinker
 Sinker
 Sinker

SALI

ATARI ST SPECIAL

Life Camp People	.....
Back Country	.....
Hollywood Hijinx	.....
Cutthroat	.....
Moonsie!	.....
Whines	.....
Suspect	.....
Infidel	.....
Zerk II or III	.....
Ultima II	.....
Borrowed Time	.....
Enchanter	.....
Sorcerer	.....
Planet Fall	.....
Suspended	.....
Nine Princes in Amber	.....
Amazon	.....
Fate/might 451	.....
Marble Madness	.....
Magic Car Set	.....
Sher Wars	.....
Soccer Game/Pk	.....
(Barbarian) (P&S)	.....
(Barbarian) (PAL)	.....
Bards Tale	.....
First World Plus	.....
Scraples	.....
Scooby	.....
Spy V Spy	.....
Clips	.....

SALE

GET INVOLVED WITH US

[illegible]

ANY GAME NOT RELEASED WILL BE SENT ON DAY OF RELEASE

**BEST SERVICE, BEST PRICES
PHONE US NOW. WE WON'T BE BEATEN**

P.P. Free on order over £5. Under £5 add 50p. Overseas £1 per game

Evesham Micros

All prices VAT/delivery inclusive

ATARI 520 STFM - Ring us now for the best deal

520 STFM with 1meg memory upgrade	PHONE
520 STFM memory upgrade kit (requires soldering)	PHONE
1040 STF	
1040 STF with SAM125 mono monitor	£249.00
Mega ST4 with mono monitor	£269.00
Mega ST4 with mono monitor	£1169.00
Atari SLIM04 laser printer, great value at	£1199.00
Atari SAM125 mono monitor	£134.00
Atari SC1224 colour monitor	£349.00
Cumana C04358 2 meg (dual) drive	£229.00
Atari SH205 hard disk, new style	£339.00
Pacer Linnet Modern Pack Inc.cable & software	£179.00
Philips CM8833 colour monitor c/w ST lead	£279.00
Philips CM8852 as above, higher resolution	£299.00
(Extra £10.00 discount on Philips monitors if bought with an ST)	

All ST prices include mouse etc. PLUS 5 disks of 5 with including wordproc, utilities, graphics, games and more.
We can quote you for any combination of hardware

3.5" disks

£1.15 in plastic case £2.99
fully guaranteed sealed retail

5.25" disks

25-£15.95 in 80 cas box £25.95
in 100 cas box £35.95
fully guaranteed sealed retail

Amiga & ST drives Why pay more?

We can supply this ultra neat high quality 2nd drive for an ultra low price

FEATURES

- One year guarantee
- 1meg unformatted capacity
- Very quiet
- Slimline styling
- Throughport
- Top quality Citizen drive
- Long cable for location left or right of computer
- Colour coded to computer

only

£99.95

Inc. VAT
Stale Amiga or ST when ordering

PRINTERS

Prices include cable, VAT & DELIVERY

star

Star LG10 replaces the HL-10, features 4 NLQ fonts, paper pump, front panel operation, PLUS 2 extra ribbons free of charge!	£199.00
Star LG10 colour NEW 7-colour version of above LG-10, includes 2 extra black ribbons free of charge	£234.00
Star NB24-10 high 24pin quality, inc. 2 extra ribbons free of charge	£269.00
Star NX 15 budget wide carriage printer	£219.00
Star NB24-15 wide carriage version of NB24-10	£179.00
Star Laser, very high spec, cost price inc 1 year on site maint.	£349.00
NEC P2200 budget 24pin great value 166/56pps	£189.00
Amstrad DMP150 good value 10"	£159.00
Amstrad LC3500 24pin at low price	£329.00
Amstrad DMP4000 best wide carriage	£329.00
Panasonic KXP1081 reliable budget 10" printer	£179.00
Panasonic KXP1082 faster version, Inc. IBM printer emulation	£219.00
Panasonic KXP1331 daisywheel	£299.00

How to order

All prices VAT/delivery inclusive
Next day delivery £5.00 extra
Send cheque, P.O. or ACCESS/NISA retail
phone with ACCESS/NISA number
Cash or P.C. offers orders welcome
All goods subject to availability & A.O.E.
Telex 332094 Fax 0388 763254
Also at 1756 Pershore Rd., Coventry, Birmingham, B39 3BT Tel: 021 453 4564

Evesham Micros
63 Bridge Street
Evesham
Worce WR11 4SF
Tel: 0582 765500

Thrilling racing game where the action is split into two, so you can race the computer or a friend. One of the most Grand Prix cars, six blow-outs and of course the all-important pitstop guarantee to give you head cramp and your brain a real racing trial

STARGLIDER

Finest • Spectrum £14.95 • £10.95
• C64 £14.95 • £17.95 • Amstrad
£14.95 • £10.95 • Atari ST £24.95
• Amiga £14.95 • IBM PC £19.95

StarGlider is a shoot-em-up comic strategy game boasting vector graphics at their very best. The action is essentially your view from the cockpit, your objective is to destroy the starglider's flagship of the Egon forces who have invaded your homeland Novena. Standard space scenario, but an outstanding game

SUMMER GAMES

Egypt/US Gold • C64 £9.95 • £14.95
• Atari XE £14.95 (Summer Games 1 only) • IBM PC £29.95

Egypt sporting simulations are of high quality but none have quite captured the playability and style of the original Summer Games and its immediate successor Summer Games 2. One to six players can take part in high jump, gymnastics, springboard diving, clay pigeon shooting, swimming pool vault - and others - with lovely large graphics and smooth animation throughout. Control of your athlete can be complex so practice is recommended

SUPER SPINT

Electric dreams • C64 £9.95 • £14.95
Amstrad £9.95 • Spectrum £8.95 • Atari ST £19.95

One of the better car-on-conventions car rental available. Win up to three players all competing at once the action is fast and furious and it will take a fairly-tuned car to complete some of the more tortuous circuits that appear later in the game

THRUST

Finest • Spectrum £1.95 • C64

£1.95 • Amstrad £1.95

Tamely sensitive controls and a large helping of real-life physics make this budget title an absolute must. Flying down through the caverns of an enemy-held planet, you have to pick up fuel and destroy hostile gun turrets without crashing into the tunnel walls. Tough enough as it is, but then you got to make the return journey with a heavy load along under your craft. Very much very solid, five

THUNDERCATS

Elite • C64 £9.95 • £14.95 • Spectrum
£7.95 • Amstrad £8.95 • £14.95

The game based on the hit TV series comic/plastic toy is a side-on view scroller that just oozes gameplay. Each of the game's 14 levels is a straight line dash from start to finish with a multitude of obstacles to avoid along the way. Visually impressive and competitively playable too

URIDIUM

Hewson • Spectrum £3.95 • C64
£3.95 • £12.95 • BBC £9.95 • £14.95

The price the resistance of scrolling shoot-em-up, blast the dreadnought and attacking ships while dodging around any large structures. Great metallic-looking dreadnoughts and the smoothest scrolling you'll ever see put this head and shoulders above the opposition. A game not to be missed especially now that C64 versions come packaged with the excellent Parachute

ZARCH

Supernova Software • Archimedes
£19.95 • Amiga and Atari ST versions under development

ACE's highest rated game to date. A solid three dimensional shoot-em-up with such graphic perfection and amazingly addictive gameplay that it became an instant classic. Zarch could do for the Archimedes what the supplier did for the Amiga

SPECIALS

Original works that are simply unclassifiable feature in this section

ATF

Digital Integration • C64 £8.95
£12.95 • Spectrum £8.95 • £12.95
• Amstrad £8.95 • £13.95

Exciting combat/simulator that's a bit of a change for Digital Integration the simulation specialists. The emphasis is on solid action the result being a sure-fire hit

DRILLER

Inventive • C64 £14.95 • £17.95 • Spectrum £14.95 • £17.95 • Amstrad
£14.95 • £10.95 • IBM PC £19.95
The three-dimensional masterpiece of exploration and adventure took a year to develop, but the wait was worth it. A whole world was created in 3-bit pixels to give the player such a feeling of being there it's uncanny. It's bold, it's

zingly original and very playable. A mile stone in computer entertainment.

ELITE

Finest • Spectrum £14.95 • C64
£14.95 • £17.95 • Amstrad £12.95
£14.95 • BBC £19.95 • £14.95
(available from Superior Software)

Still the best space trading game. Elite set a standard for other companies to follow. One of the first space games to use vector graphics, as a shooting and trading affair that across several galaxies with plenty of variety to the gameplay. You can trade legal goods in (relatively) safe systems, or run the gauntlet of pirates in the galaxies, deeper sectors with your hold full of contraband. Either way there's a nice bit in zero-G dogfighting and a big task as you'll find anywhere

MAGNETRON

Frabird • Spectrum £7.95cs • C64 £8.95cs £12.95cs
Puzzles and action Steve Turner style
See more review on page 51

MATCH DAY 2

Ocean • Spectrum £7.95cs £14.95cs • C64 £8.95cs £12.95cs • Amstrad £3.95cs £14.95cs

Definitely the football game on mornis magnificent animation, great gameplay moves and skilful computer opponents. Various improvements over the original make this a must for all computer football fans.

QUEDEX

Thetamys I C64 £9.95cs £14.95cs

In this impressively challenging game you must steer a metallic ball through ten different screens of mazes, bonuses and obstacles all within a set time limit. This simple game concept has a host of added features to make it particularly pleasing you can carry over unused time to the next screen, for example and tackle the different screens on planes in any order you wish. Excellent graphics and utterly absorbing play.

SPINDIZZY

Electric Dreams • Spectrum £9.95cs • C64 £9.95cs £14.95cs • Amstrad £9.95cs £14.95cs

Tremendous skill steers your spinning top over tough obstacles and collect jewels against a Swedish time limit. The game landscape is a vast system of cat walks, ramps, towers, and bampoles surrounded by lethal drops - and NO safety rails! Floor switches activate hits and traps game but trapping them in the

right order can be harder than it looks. A few fast guys and a lot of nifty touches, but the exploration's the thing.

TAU CETI/ACADEMY

CRI • Spectrum £9.95cs • C64 £9.95cs £14.95cs • Amstrad £9.95cs £14.95cs • Alan ST £19.95cs • Amiga £19.95cs

Flight simulator/what am up and its sequel which are both incredibly smooth and well put together. The attention to detail is impeccable as you set off on hair-raising missions as a space cadet. In Academy you get to design your own space skimmer car as well.

WIZBALL

Ocean • Spectrum £7.95cs • Amstrad £8.95cs £12.95cs • C64 £8.95cs £14.95cs

A compelling and original ball game in which you become the wizard and must set out to conquer the colour characters' which are intent on eliminating the spectrum and retaining the landscape grey and drab. Controlling the wizard is great fun and makes this one of the most playable games to have appeared for a long time.



ADVENTURES

Adventure games require text input from the player and give a text response in return. There are many sub-categories involving icon-control, graphic depiction of locations, and even speech output.

THE BARD'S TALE

Electronic Arts • C64 £14.95cs • Amiga £24.95cs • Alan ST £24.95cs • IBM PC £24.95cs

Build a party of up to six adventures and sail forth through the city in search of treasure, combat and fame. You choose the direction in adventures during play and the task involved is pretty riddles - don't expect to finish it inside a month or two.

BEYOND ZORK

Infocom/Activision • C64 £19.95cs • Amiga £24.95cs • IBM PC £24.95cs • Alan ST £24.95cs

Infocom's attempt to muscle in on the role-playing market is a great success. The game the fabulous Cosmos of Qwendo is a tale that combines the wit and ingenuity of one of the world's most original software companies with state-of-the-art plotting and gameplay. Text-only, but with an on-screen mapping facility.

GUILD OF THIEVES

Ranbar/Magnetic Scrolls • C64

£19.95cs • Spectrum £19.95cs • Amstrad £19.95cs • C64 £19.95cs • Amiga £24.95cs • IBM PC £24.95cs • Alan ST £24.95cs • Mambroth £24.95cs

Britain's newest adventure software house produces a classic traditional treasure hunt with state-of-the-art graphics and some very tricky puzzles. Powerful parser helps create a convincing game world with humor and imagination.

JEWELS OF DARKNESS

Ranbar/Level 9 • C64 £14.95cs • Spectrum £12.95cs • Amstrad £14.95cs • C64 £19.95cs • Amiga £19.95cs • Alan ST £19.95cs • Mambroth £19.95cs

Laval 9 Britain's oldest adventure production firm, have put together three of their classic releases Colossal Adventure, Dungeon Adventure and Adventure Quest on one disk. The games have been updated with graphics and larger vocabularies and are due to the original spirit of adventuring that you're likely to find.



THE ATARI ST

SPECIALIST

BEST PRICES FASTEST DELIVERY!

GALES	ONLY	ONLY	
Captain Blood	12.95	Intermission Soccer	12.95
Dungeon Master	18.95	Garner Command	18.95
Flora	13.95	Pool	8.95
Flonox	13.95	March 3...	12.95
Thetamys	13.95	Rolling Thunder	13.95
Knightmare	13.95	Strip Poker II	13.95
Bermuda	13.95	Get Dyer Off	13.95
Scorpions	13.95	Scorpions Out...	13.95
Scattering Wings	13.95	Karen	13.95
Pradior	13.95	Dark Castle	13.95
Slapshot	13.95	Tournament of Death	13.95
Joe Blade	6.95	Crash Games	13.95
Black Lamp	13.95	Alphabet	13.95
Gunsling	16.95	Powerplay	13.95
Terma	13.95	Terma	13.95
Universal Military Sim	18.95	Sagami	13.95
Enduro	13.95	ECO	13.95
Warlock	10.45	Wizball	13.95
Rampage	10.45	Bubble Bobble	13.95
Get Ties	13.95	One Wore	13.95
Text Drive	18.95	Winch Olympiad II	13.95
Championship 2000	18.95	Tangorwood	13.95
Test Drive	20.95	Beetle Tale	16.95
Defender of the Crown	13.95	Chopper X	6.95
Battleman (Hazard)	18.95	Lead Pursuit	13.95
Blitzkrieg	16.95	Tangorwood	13.95
115 Strike Eagle	16.95	War for First October	8.95
Goldrunner	16.95	Punch	12.95
Battleman (Hazard)	16.95	Caplan Nest	15.10
Sub Battle Simulator	18.95	Marble Madness	18.95
Leadboard	18.95	Amnand	18.95
1 Tourna	18.95	Stanford	18.95
Street Force Hammer	18.95	Colonial Conquest	20.95
Flight Simulator 2	34.95	Balance of Power	29.95
Scenario 2 & 1	18.95		

ADVENTURES	ONLY	ONLY	
Junior	16.95	Poison Quest	13.95
Ultima 2, 3 or 4	16.95	Liquid Sun Lany	13.95
Amnesia of Borneo	16.95	Crime Ranger	16.95
Guilt of Thieves	16.95	Pawn	16.95
Silicon Dreams	13.95	Jewels of Darkness	13.95
Alarmist Rummy	13.95	Highlanders Guide	20.95
Kings Quest 2 Pack 1 Kings Quest 1 and 11			
			18.95

ART AND DESIGN	ONLY	ONLY	
Quantum Paint	12.95	Stylus 1/2	4.95
Advanced Art Studio	18.95	Digital 516	18.95
GFA Draw	89.95	Easy Draw 2	89.95
Pro Spray Gun	29.00	CAD 3D	39.00

Cyber Studio (Mac 3D 2.0 - Cybernetic)			62.85
Cyber Control	48.00	Cyber Paint	56.00
Genesis	54.00	3D Developers Desk	24.00
Human Forms Desk	24.00	Architecture Desk	24.00
Utility Design Desk	19.50	Shen/Ten 3D Glasses	145.00

UTILITIES	ONLY	ONLY	
Dramatic Publisher	27.00	superactive Historical	49.95
Procopy	27.00	Word Writer	59.95
Trimble	27.00	First Word Plus	59.95
Zoomcard 2	47.95	ST Doctor	13.95
Pro Sound Designer	85.00	Passport	18.95
Saved	20.95	STUFF	13.50
K Data	36.95	Back Pack	39.95
K Comm 2	36.95	K Switch	23.50
		K Switch 2	49.95

LANGUAGES	ONLY	ONLY	
Power Basic	29.95	Heath Basic	59.95
GST Macro Assembler	18.50	GST C Compiler	18.50
Fast ASM	13.95	Mark Williams C	89.00
Fast Basic (Disk)	30.95	Fast Basic (Ram)	84.95
GFA Basic Interpreter	36.95	GFA Basic Compiler	36.85
K Shell	36.95	MCC Assembler (NEW)	36.85
MCC Tachos C3.01	64.95	MCC Basic 1.0	89.85

HARDWARE	ONLY	ONLY	
Locking Disk Box 180	14.00	Funny Mouse Cover	50
Locking Disk Box 140	11.00	Mouse Mat	7.50
3 1/2" Disk (DS/DD) (x10)	13.00	Keyboard Cover	8.00
3 1/2" Disk (SS/DD) (x10)	13.00	Screenjoy	6.50
Competition Pro 2000 (Black)	14.50	Win Card Controller	3.95
Competition Pro 2000 (Green)	14.50	Quickshot II	13.00
Joystick/Mouse attachment	4.95	Quickshot Turbo	17.00

MEDIA BOX - Holds 150 disks, Compact and Stacking.
START - ST quantity magazine with disk 1 latest edition. 12.85

All Prices include VAT and FIRST CLASS POST All Stock items sent by RETURN OF POSTAGE (0636) 79997 for 24 HOUR SERVICE!

BYTEBACK

Dept. Aca. 6 MUMBY CLOSE, NEWARK, NOTTS NG24 1JE

BUYERS' GUIDE

HARDWARE & SOFTWARE

BUYLINES

Disk Format: run 500A formatted built in drive
Disk Price: Assured £3.00
Disk Performance: Good and fast
Keyboard: 101 keys programmable auto repeat rate. Keyboard not surprisingly cheap feel good quality all machine
Joystick mouse: 3 button mouse supplied joystick not supplied
Price: £154.93 special. Cartronics compatible

Parallels *is* just another acronym. It's 5MHz, 16MHz, 32MHz, 64MHz, 128MHz, 256MHz, 512MHz, 1024MHz, 2048MHz, 4096MHz, 8192MHz, 16384MHz, 32768MHz, 65536MHz, 131072MHz, 262144MHz, 524288MHz, 1048576MHz, 2097152MHz, 4194304MHz, 8388608MHz, 16777216MHz, 33554432MHz, 67108864MHz, 134217728MHz, 268435456MHz, 536870912MHz, 1073741824MHz, 2147483648MHz, 4294967296MHz, 8589934592MHz, 17179869184MHz, 34359738368MHz, 68719476736MHz, 137438953472MHz, 274877906944MHz, 549755813888MHz, 1099511627776MHz, 2199023255552MHz, 4398046511104MHz, 8796093022208MHz, 17592186044416MHz, 35184372088832MHz, 70368744177664MHz, 140737488355328MHz, 281474976710656MHz, 562949953421312MHz, 1125899906842624MHz, 2251799813685248MHz, 4503599627370496MHz, 9007199254740992MHz, 18014398509481984MHz, 36028797018963968MHz, 72057594037927936MHz, 144115188075855872MHz, 288230376151711744MHz, 576460752303423488MHz, 1152921504606846976MHz, 2305843009213693952MHz, 4611686018427387904MHz, 9223372036854775808MHz, 18446744073709551616MHz, 36893488147419103232MHz, 73786976294838206464MHz, 147573952589676412928MHz, 295147905179352825856MHz, 590295810358705651712MHz, 1180591620717411303424MHz, 2361183241434822606848MHz, 4722366482869645213696MHz, 9444732965739290427392MHz, 18889465931478580854784MHz, 37778931862957161709568MHz, 75557863725914323419136MHz, 151115727451828646838272MHz, 302231454903657293676544MHz, 604462909807314587353088MHz, 1208925819614629174706176MHz, 2417851639229258349412352MHz, 4835703278458516698824704MHz, 9671406556917033397649408MHz, 19342813113834066795298816MHz, 38685626227668133590597632MHz, 77371252455336267181195264MHz, 154742504910672534362390528MHz, 309485009821345068724781056MHz, 618970019642690137449562112MHz, 1237940039285380274899124224MHz, 2475880078570760549798248448MHz, 4951760157141521099596496896MHz, 9903520314283042199192993792MHz, 19807040628566084398385987584MHz, 39614081257132168796771975168MHz, 79228162514264337593543950336MHz, 158456325028528675187087900672MHz, 316912650057057350374175801344MHz, 633825300114114700748351602688MHz, 1267650600228229401496703205376MHz, 2535301200456458802993406410752MHz, 5070602400912917605986812821504MHz, 10141204801825835211973625643008MHz, 20282409603651670423947251286016MHz, 40564819207303340847894502572032MHz, 81129638414606681695789005144064MHz, 162259276829213363391578010288128MHz, 324518553658426726783156020576256MHz, 649037107316853453566312041152512MHz, 1298074214633706907132624082305024MHz, 2596148429267413814265248164610048MHz, 5192296858534827628530496329220096MHz, 10384593717069655257060992658440192MHz, 20769187434139310514121985316880384MHz, 41538374868278621028243970633760768MHz, 83076749736557242056487941267521536MHz, 166153499473114484112975882535043072MHz, 332306998946228968225951765070086144MHz, 664613997892457936451903530140172288MHz, 1329227995784915872903807060280344576MHz, 2658455991569831745807614120560689152MHz, 5316911983139663491615228241121378304MHz, 10633823966279326983230456482242756608MHz, 21267647932558653966460912964485513216MHz, 42535295865117307932921825928971026432MHz, 85070591730234615865843651857942052864MHz, 170141183460469231731687303715884105728MHz, 340282366920938463463374607431768211456MHz, 680564733841876926926749214863536422912MHz, 1361129467683753853853498429727072845824MHz, 2722258935367507707706996859454145691648MHz, 5444517870735015415413993718908291383296MHz, 10889035741470030830827987437816582766592MHz, 21778071482940061661655974875633165533184MHz, 43556142965880123323311949751266331066368MHz, 87112285931760246646623899502532662132736MHz, 174224571863520493293247799005065324265472MHz, 348449143727040986586495598010130648530944MHz, 696898287454081973172991196020261297061888MHz, 1393796574908163946345982392040522594123776MHz, 2787593149816327892691964784081045188247552MHz, 5575186299632655785383929568162090376495104MHz, 11150372599265311570767859136324180752990208MHz, 22300745198530623141535718272648361505980416MHz, 44601490397061246283071436545296723011960832MHz, 89202980794122492566142873090593446023921664MHz, 178405961588244985132285746181186892047843328MHz, 356811923176489970264571492362373784095686656MHz, 713623846352979940529142984724747568191373312MHz, 1427247692705959881058285969449495136382746624MHz, 2854495385411919762116571938898990272765493248MHz, 5708990770823839524233143877797980545530986496MHz, 11417981541647679048466287755595961091061972992

at least one more on the way. A couple of adventures under development.
Graphics: Polished, anonymous, currently a couple of patches in the pipeline.
Music: Again, anonymous, polished. Very nice, albeit as yet, however.
Predicts: Very good, but not necessarily for 32-bit market.
Software Loading: Competent, no obvious weaknesses.

Beef buy price: As set
Second hand availability: Not yet
Maintenance: On van equivalent
machines, return to dealer

Disk Format: 3.5in floppy, 800K formatted per disk. 654 and 6128 drives look in A:64 drive.

Disk Price: About \$3 ap

Disk Performance: Reasonable and quick.

Keyboard: 4-keyed player keys with audible click in tractorless. Separate cursor cluster and dedicated numeric keypad. Very usable for word processing etc.

Jeepack Mouse: Standard 5 pin D-type. Tired very much, but others are available.

Ports: CP654 has RS232C connector - takes computer's RS232C interface. CP6128 has parallel port. On DCG with serial interface parallel port. 30mm stereo speaker system. cassette port.

CP654/6128 PCB edge connector - takes RS232C interface. Centronics parallel

Existing Software Base: Good even if you're targeted Spectrum or C64.

Current Releases: Reasonable mass major Spectrum and C64 titles are converted.

Games: Good, but some converted titles run slower than the Spectrum or C64 originals.

Additions OK: But Viscom considering withdrawing support for this format.

Caveats: Consideration of titles.

Music: Reasonable number of tracks, but poor in comparison with CDi.
Prospects: Uncertain. After initial interest, sales of CPC software have dwindled but there should still be a reasonable amount of games and utilities around.
Software Loading: Tape loading is a real pain, only by 6x and reliable. Cdr loading fast and reliable.

Best Buy Price: Shred around 1.5¢ per page. You could try for a GPC664 for about £50.00, but these are becoming increasingly rare. The 128MB memory of the GPC664 isn't important; the LPC664 can represent a bargain. 4 you can't find one.

Second Hand Availability: Very good. Often plenty on offer in classified ads sections of age related magazines.

Maintenance: One year's guarantee. Faulty machines return to dealer. 664 statutory rights only.

Disk Format: 1.44MB, 5.25", 16 tracks per side, 512 bytes B and 512/128K formatted track layout

Disk Price: About \$3.00

Disk Performance: Fast and reliable

Disk drive: An drive have been produced to take 5.25 disk so that standard ASCII files in CP/M format can be transferred to the PCjr machines

Keyboard: Includes extra keys for word processing functions. Keyboard in 5512 is substantially improved version

Joystick/Mouse: Not supported. Joystick and mouse can be attached via serial cable. Joy-stick

Parallel: One expansion slot takes RS232C serial and Contonico Parallel interface; center port for bundles printer.

Existing Software Base: Not wide but generally programs of good quality. Appealed to specialist niche-type markets.

Current Releases: Very few.

Games: Arcade titles are very scarce and of course monochrome only. Adventures are slightly more numerous, but again the range is small. If number of Inform titles were available under CPM, this would be a very attractive

Graphics: Very few dual-scan low-end CAD/DWG editors available.

Music: Almost all machines not configured as such.

Prospects: Would be poor but for launch of 93/92. Revival will depend on new machines popularity.

Software Lifespan: Fast and cheap.

Maintenance: 21% g.c.B* + good 47760 + fully
 10 months + turn to dealer
Best Buy Price: Not generally sold below
 RRP
Second Hand Availability: For 4256 and
 9512 good 55k, but new for second hand
 market will cost

Disk Format: Just a noted drive built in.

Disk Price: Amount is £100.

Disk Performance: Fast and reliable, but not a lot for £100, shows that hasn't been thoroughly tested.

Keyboard: Supplied 81 keys including function keys and numeric keypad. Optional extra is the Apple Extended Keyboard with 105 keys.

Joystick/Mouse: Joystick not supported. High quality one button mouse supplied with machine.

Ports: 5F: Apple desktop Bus connector + RS232C/RS422 serial; External disk drive; 96 pin Euro Cin quad connector; SCSI II - DB 25 connector; External audio amplifier; I + 2 RS232C/RS422 serial; DB 25 SCSI II

\$\$\$

Existing Software Base: Wide range of software available in virtually all fields except games.

Current Releases: Adequate range of US high-end in the business or ODP field.

Games: Very few popular games but advanced users may prefer to develop.

Graphics: Use of interesting software for those involved in DM publishing.

Music: Very well supplied for MIDI software, but it's a niche niche.

Perspectives: Excellent, especially in business and DTP.

Software Learning: Good and relative.

Best Buy Price: At \$1,199, the M100 is priced right at the \$1,200 mark, generally less than the list price.

Second Hand Availability: Reasonable, but it's tricky to find. There aren't a lot of special offers.

Maintenance: One-year guarantee. Apple offers AppleCare+ insurance, plus it's out to cover cost of repairs after guarantee has lapsed.

Disk Format: 1.44 MB (formatted) 3.5 in.
Price: \$299.95 (drive only) drive/burn
Disk Price: About \$1.00
Disk Performance: Fast and no-ack.
Keyboard: 38 keys including 10 function keys.
Full mouse: Keyboard with audible click.
Joystick: Mouse. Joystick ports are standard.
Two buttons: Mouse supplied with machine.
Parse: MDI out (5 pin) DMI MDI in (5 pin)
1.44 in. Audio but Audio in RGB monitor (info
 monitor) (info) monitor port second disk drive
 (info) mouse/trackball joystick (info) TV

Operating Software Base: On the new disks

Current Releases: Most major software houses are converting their output to ST now, and several smaller houses specialize in ST titles.

Games: Range of arcade titles run good. Adventures are rarer but generally of very good quality.

Graphics: Impressive, with several first-rate blockbusters on the market.

Music: Excellent. Many companies producing sound editors, samplers, synths, and sequencers.

Perspectives: Very bright. Could soon rival Speed, um, and C&G, for number of new releases.

Software Loading: A 35th disk can't hold a really large CD program, so new distributions becoming increasingly common. The disk-changing fiasco requires fan get tedious, especially while you're get to swap disks during the

Best Buy Price \$2,997.10 **MSRP** \$3,999.00
MSRP \$3,999.00 **MSRP** \$3,999.00
Second Hand Availability Yes to - 100%
Maintenance One year guaranteed Return to
 Dealer 1 Year

	IN BRIEF	GRAPHICS & SOUND
COMMODORE 64/128		
Models: 1000, 1200 Package: C24 and 128 keyboard plus C24 tape recorder, often plus accessories. C1280 keyboard plus system box disk drive. Memory: C64 64K, C128 128K, C1280 128K. Processor: C64 6502, 128 1280 6502 plus 7650 for use as CP/M mode. Recommended Retail Price: C64 £155.99, C128 £199.99 according to package, C1280 £299.99 stand alone, £229.99 with C24, £249.99 with C24 plus software. C1280 £299.99.	Disks: 4 of standard game software, 128 and 1280 can be configured for business use using the CP/M standard and giving access to a vast range of business and utility software. The 64 is particularly difficult because of its particular programming due to out date BASIC.	Resolution: 400 dots vertically, 320 dots horizontally. 64 mode plus 449 x 250 in 128 modes 640 x 400 dot display. Palette: 16. Colors: 8. None - Attribute to pixel places minor limitations on use of colours. TV: Yes. Monitor Output: 4K - composite video, 128, 200, 640 for 80 column display. Monitor Supplied: No. Monitor Options: C1280M £119.99 stand, 1501 £249.99 colour, 1508 £349.99 colour.
COMMODORE AMIGA		
Models: 1000, 2000, 500. Package: Keyboard with built in disk drive. A1000 is discontinued. No packaging will stand on different dealer policies. Memory: A500 512K, A1000 £254K, A2000 £324K. Processor: Motorola 68000. Recommended Retail Price: A500 £199.99, A1000 none - discontinued, A2000 £129.99.	Disks: 4 of standard game software, 128 and 1280 can be configured for business use using the CP/M standard and giving access to a vast range of business and utility software. The 64 is particularly difficult because of its particular programming due to out date BASIC.	Resolution: 400 dots vertically, 320 dots horizontally. 64 mode plus 449 x 250 in 128 modes 640 x 400 dot display. Palette: 16. Colors: 8. None - Attribute to pixel places minor limitations on use of colours. TV: Yes. Monitor Output: 4K - composite video, 128, 200, 640 for 80 column display. Monitor Supplied: No. Monitor Options: C1280M £119.99 stand, 1501 £249.99 colour, 1508 £349.99 colour.
IBM & COMPATIBLES		
Model: IBM 5150, the original, with many clones include Amstrad PC1512 and 1440 series, Tandy 1000EX, Spectrum Borowed 70 etc. The specifications may apply to other computers, but check with dealer first. Package: Depends on manufacturer, eg. Amstrad supply all machines with monitors. You can buy the bare bones or the works. Memory: Usually 1024-65536. Processor: Intel 8086, 8088 or variants. Recommended Retail Price: From around £450 for the cheaper basic clones to £1500 for machines with hard disk, colour monitor etc. IBM machines are quite a lot more expensive.	Disks: 4 of standard game software, 128 and 1280 can be configured for business use using the CP/M standard and giving access to a vast range of business and utility software. The 64 is particularly difficult because of its particular programming due to out date BASIC.	Resolution: 400 dots vertically, 320 dots horizontally. 64 mode plus 449 x 250 in 128 modes 640 x 400 dot display. Palette: 16. Colors: 8. None - Attribute to pixel places minor limitations on use of colours. TV: Yes. Monitor Output: 4K - composite video, 128, 200, 640 for 80 column display. Monitor Supplied: No. Monitor Options: C1280M £119.99 stand, 1501 £249.99 colour, 1508 £349.99 colour.

MPC Software

If you're lucky enough to own one of the following:

AMIGA
ARCHIMEDES
ST

Then you should know about MPC, 'cos we've got one of the largest ranges of software & hardware for these machines, including a lot of equipment imported direct from the US that is only carried by a handful of other dealers. Not only that, but you've got our excellent service, support and prices. Here's just a sample of our range:

Amiga	Perfect Sound Stereo Digitizer	£70
	Digiview 2 PAL version	£155
	Sculpt 3D	£70
	Publishing Partner Professional	£150
	Ferrari Formula 1 (NOW in)	£24
	Deluxe Paint 2	£60
ST	Realizer Video Digitizer	£90
	Publishing Partner Professional	£150
	Rolling Thunder (also on Amiga)	£18
	Captain Blood	£19
	Gauntlet 2	£19
Archimedes	Zarch	£16
	Minotaur	£16

If you want to know more, call in or phone for a copy of our latest newsletter

Welbeck House (69, Loughborough Rd).
West Bridgford, Nottm.
TEL: (0602) 820106/455114

TELE-GAMES

Europe's Largest Stock Of Video Games & Cartridges For —

ATARI
2600
INTELLIVISION
IN STOCK NOW

Nintendo
SEGA

SPECIAL OFFER

Mega game worth £24.95 FREE with Sega console package price £99.95.

Sega console with light phaser and four FREE games

NOW ONLY

£124.95

WICO JOYSTICKS FOR NINTENDO IN STOCK NOW
The leading Video game specialists. Send for lists (state make of game).
TELEGAMES, WIGSTON, LEICESTER, LE1 1TE (0533-880445)
NEW COLECO TITLES NOW IN STOCK NOW OVER 100 TITLES TO CHOOSE FROM

HARDWARE & SOFTWARE		BUYLINES
<p>Two disk drives are currently available – the C1541 and the more recent C1571.</p> <p>Disk Format: 5.25in 1541 140in formatted 15.7 340in formatted 1580 Has built in drive.</p> <p>Disk Price: £110 (1541 in bulk).</p> <p>Disk Performance: Commodore 1541 drive is noticeably faster than many 1571 models (see technical information).</p> <p>Keyboard: Raised plastic keys with audible tactile feedback, plus function keys. Cursor key arrangement very awkward.</p> <p>Joystick/Mouse: Provision for two standard</p>	<p>Joystick/Mouse: Two standard 1571 mouse available, plus third party menu formatted mouse.</p> <p>Ports: 2 joystick expansion cassette, ion standard serial, composite video (C64) RGB (129 & 129D), TV, User port.</p> <p>***</p> <p>Existing Software Base: Excellent. Only rivalled by the Spectrum.</p> <p>Current Releases: Still pouring out.</p> <p>Games: Action action seemed to have. Action games – good selection.</p>	<p>Graphics: Good selection. Quality of graphics means that programs can be reasonably sophisticated.</p> <p>Music: Good variety of sound effects, some samplers. Many MIDI utilities available.</p> <p>Prospects: Supply will eventually slow, but Commodore games may last longer than Spectrum (due to portability of games from US).</p> <p>Software Loading: Shows up always on tape, and disk loading not as fast as it should be due to slowness of dedicated drive. Most software produced with fast loader routines.</p>
<p>Disk Format: 5.25in bulk formatted drive built in.</p> <p>Disk Price: Around £100.</p> <p>Disk Performance: None and surprisingly sluggish.</p> <p>Keyboard: 94 key, 10 function keys, numeric keypad, separate cursor cluster.</p> <p>Joystick/Mouse: Mouse supplied as standard.</p> <p>Ports: Two joystick module. Audio output left</p>	<p>and right. Extra disk drive, serial, parallel, 1 with brains parallel, RGB video. Monochrome.</p> <p>Ports: Expansion bus.</p> <p>***</p> <p>Existing Base: Small in comparison to 8-bit machines.</p> <p>Current Releases: Beginning to pick up.</p> <p>Games: Accurate products, not yet up to the capabilities of the machine. Few advantages.</p>	<p>Graphics: Good, but A500 needs to establish a larger user base before becoming a prime development machine.</p> <p>Software Loading: A noisy process.</p>
<p>Disk Format: Mostly 5.25in, some very rare models use 3.5in. Includes various 3200 format disk drives built in.</p> <p>Disk Price: Mail order £130 for 5.25in, around £150 for 3.5in.</p> <p>Disk Performance: Reliable and pretty fast, hard disks of course are even faster.</p> <p>Keyboard: All models used raised plastic keys with audible tactile feedback and numeric function keys and separate numeric keypad. A wide variety of third party keyboards is available.</p> <p>Joystick/Mouse: Two different joystick standards exist (IBM (unavailable) and Amiga) (Alan</p>	<p>also – the input for games playing). Most games support either IBM or both, but Amiga's can now be adapted to use IBM joystick.</p> <p>Newer models: (see Amiga's) include mouse in package. Third party mice are available for inexpensive PCs.</p> <p>Ports: VMEs, ESD, Commodore parallel, RS232, expansion port with most machines – but some of these are optional.</p> <p>***</p> <p>Existing Software Base: Vast.</p> <p>Current Releases: Still pouring out, with price levels dropping as well.</p> <p>Games: Cheaper machines have meant that</p>	<p>new games are being released on the A500.</p> <p>Both arcade and adventure: CGA graphics standard used to be predominant, but an increasing number of VGA games with superb graphics are appearing. PC only recently ported over to a machine with games potential.</p> <p>Graphics: Many sophisticated packages for business presentation graphics, not too much for the price.</p> <p>Music: Fair selection of MIDI packages and interfaces, though those tend to be expensive.</p> <p>Prospects: Right device as long as there are PCs on desk.</p> <p>Software Loading: Cool, fast, reliable.</p>
		<p>Best Buy Price: All 3 are available, but the A500 is the most popular. If you know what you're doing even better, you can find them at discount stores. If you don't know what you're doing go for a reputable brand.</p> <p>Second Hand Availability: PCs can often be picked up in auctions of computer and office goods, or through magazine adverts.</p> <p>Maintenance: Return to dealer if faulty, but a maintenance contract – often surprisingly cheap – can guarantee your peace of mind.</p>

WIGHT Computing Home Micro's

Atari 520 STFM	344.00
Amiga 500A includes Modulator & Software	460.00
Commodore 1541 C disc drive includes 29 Games	159.00
Commodore 64C	152.00
Spectrum 128 plus 2	129.00
DMP 3180 (PC compatible printer)	189.00
Used Spectrum 48K plus 3 month warranty	80.00
Citizen 1200 printer	199.00
Joysticks	from 6.95
501 1 meg expansion kit (Amiga)	115.00
Amiga 500A Hi-res monitor, printer & business software	659.00

Part Exchange Welcome Minimum £20

Phone for items not listed

REPAIRS	
Spectrum Key board faults	8.00
Spectrum	18.00
Commodore 64/C16 Plus 4vic 20	26.50
Acorn Electron non ULA Faults	25.00
New Vic 20 Modulators	17.50

Other Machines Please Phone

3 Tape Leads	3.50
TV or Tape Leads Spectrum	1.60
Leads made to your requirements	
Large Range of leads & adaptors in stock	
3 5 inch disk in clear plastic library case	15.00

Spectrum Power supply unit £5.00

Commodore 64 PSU repairable £20

Cumana 1 meg drive

CUMANA DRIVE

Colour Monitor



Purchases of over £100 include 3 day courier delivery

Barclay Card phone order 0983 68978

Or write W C H M, 122 High Street, Ryde, Isle of Wight, PO33 2SU

All prices include VAT @ 15% postage & packing (UK) BFPO

Dealers for Time Works Software phone for prices

HARDWARE & SOFTWARE

BUYLINES

Disk for Plus 3 only

Disk Format: 361 (usable) 180K formatted per disk drive built in
Disk Price: Around £10.00

Disk Performance: Generally fast and reliable. Some formats unleash compatibility problems may arise with commercial software - but they haven't surfaced yet.

Keyboard: The Spectrum Plus keyboards are made of hard plastic and sit on the desktop with a sturdy base. The Plus 2 3 keyboards are round hard plastic keys. Unlike the older model, it can be used more easily for word and drawing.

Joystick/Mouse: None standard on all models. Suitable interfaces widely available. Computer joystick included in Plus 2 and 3 packaging. Third party mice available but mouse compat-

ble software rare

Ports: 2 joystick, 8025x MDI, RGB monitor. Audio: Numeric keypad, Expansion I/O: TV, ***

Existing Software Base: Second to none. Current releases: Most major software firms are continuing to bring out the majority of their titles on the Spectrum.

Games: A huge number of arcade titles ranging from algebra to excellence. Wide range of adventures, many called Graphics: Full selection, some of which exceeds their graphics performance from the machine than they would expect from the spec. Music: A couple of MIDI interfaces available plus Oberon Spectrum 2000 synth. Prospects:

Software Loading

Cassette versions slow as ever

Best Buy Price

Plus can now be picked up cheaply as no longer manufactured. Try to find a whole selling of 90 packs at around £50.

Second Hand Availability: Good N.B. The original Sinclair 48K model can still be found second hand. If you don't mind the ribbon keyboard it could represent a good investment. Ensure that you get the 48K model - there is no software way of identifying it from the 128K models, which are quite useless for running the necessary software.

Maintenance: Antistat-bagged Spectrums have a year's guarantee - save the machine back to the dealer who'll usually replace the price. Amstrad Spectrum (Plus and Plus 2) bought as new and with a guarantee period, contact Sinclair Research.

Disk Not available

Keyboard

Joystick/Mouse

Note: 2 game controllers, cartridge slot. Robot can't. Not designed for future expansion. Not as high quality as recommended as games console only.

Disk Not available

Keyboard

Joystick/Mouse

Note: 2 game controllers, cartridge slot. Robot can't. Not designed for future expansion. Not as high quality as recommended as games console only.

Software Loading

Cassette versions slow as ever

Disk Not available

Keyboard

Joystick/Mouse

Note: 2 game controllers, cartridge slot. Robot can't. Not designed for future expansion. Not as high quality as recommended as games console only.

Best Buy Price

Plus can now be picked up cheaply as no longer manufactured. Try to find a whole selling of 90 packs at around £50.

Second Hand Availability: Good N.B. The original Sinclair 48K model can still be found second hand. If you don't mind the ribbon keyboard it could represent a good investment. Ensure that you get the 48K model - there is no software way of identifying it from the 128K models, which are quite useless for running the necessary software.

Maintenance: Antistat-bagged Spectrums have a year's guarantee - save the machine back to the dealer who'll usually replace the price. Amstrad Spectrum (Plus and Plus 2) bought as new and with a guarantee period, contact Sinclair Research.

MEGABYTE

SCOTLANDS PREMIER COMPUTER CENTRE
12 Ellick Square, Town Centre, Cumbernauld G87 1ND

MARCH MADNESS IS IN THE AIR AT MEGABYTE THE SUPER COMPUTER SUPERDEAL IS WITH US IS THIS YOU?

YOU OWN A COMPUTER

YOU ENJOY YOUR COMPUTER
BUY SOFTWARE REGULARLY
USE IT MAINLY FOR LEISURE

YOU CAN THINK OF OTHER USES

WORD PROCESSING, DESIGN AND GRAPHICS, MUSIC, DATA STORAGE, PROGRAMMING... YOUR COMPUTER CAN DO IT BUT IT NEEDS MORE MONEY SPENT ON IT, FOR A PRINTER PERHAPS OR A DISK DRIVE MONITOR, SOFTWARE... IS IT WORTH IT?

OR IS THIS YOU?

YOU RUN A SMALL BUSINESS, ROSSIFY FROM HOME, THERE IS A COMPUTER IN THE HOUSE, MAYBE NOT YOURS BUT YOU SEE ITS POTENTIAL, WORD PROCESSING, DATA STORAGE, FINANCIAL PLANNING... BUT IT WOULD BE WISE TO ZAP THE ODD ALIBI, DESIGN THE ODD PRESENTATION TO THE BANK MANAGER, CREATE YOUR OWN ADVERTISING COPY, THE LIST IS ENDLESS... IS THERE SUCH A COMPUTER THAT I CAN AFFORD?

WHAT EVER DESCRIBED FITS

THERE IS ONLY ONE COMPUTER.

THE COMMODORE AMIGA A500 SYSTEM

THE AMIGA A500 COMPUTER
INC MOUSE, SOFTWARE ETC

THE 1064 COLOUR MONITOR

THE WR8 1200B PRINTER

AMIGA TRANSFORMER (PC emul)

SPEECH SHEET, DATABASE, W.P.,
DELUXE PAINT (may vary)

Normal Cost £1798.95

MEGABYTE PRICE..

£899.00 (+ VAT)

SAVE NEARLY £900.00

MONO SYSTEM

£899.00 (+ VAT)

SAVE OVER £900.00

POOLSWINNER

THE ULTIMATE POOLS PREDICTION PROGRAM

- MASSIVE DATABASE:** Poolswinner is a sophisticated Pools prediction and fix fixture programme with the largest database available - 2000 matches over 10 years.
- PREDICT:** Not just SCOREDRAWS but AWAYS, HOMES AND SCORES.
- RECORDING:** SELECT information that Poolswinner predicts significantly better than CHANCE.
- ADAPTABLE:** Probabilities are given in easy terms - chosen as many selections as you need for you bet. The program prediction formula can be set by the user - you can develop and use your own unique method.
- SIMPLE DATA ENTRY:** All new seasons in the program. Simply type in the selections.
- LEAGUE AND NON-LEAGUE:** All league and non-league teams are supported. And also the two league pools often used in pools company.
- PRINTER SUPPORT:** Print hard copy of pool data if you have a printer.

PRICE £18.00 (all inclusive)

FIXGEN 87/8 (AT LAST! No more struggling for hours to get the fixture list from the computer. FIXGEN will deliver the 1987/8 fixture list in the database and the full fixture list is programmed into the database. Fully compatible with Poolswinner. Yearly updates available.

POOLSWINNER with FIXGEN £18.00 (for both)

COURSEWINNER v3 NOT JUST A TYPING PROGRAM, Coursewinner V3 can be used by experts and occasional punters alike. You can develop and use your own unique word processing system for selecting the best analysis formula or use the program in simple mode. Comprehensive V3 has statistical analysis of major factors including goal lines, speed, recent results, average points per game, league, position, transfer and injury form etc. It can also predict likely results, goal lines, odds, etc. You can update the database - some games use it. CALL 0244 770000. SUPPORT.

PRICE £18.00 (all inclusive) includes TAT AND National News versions.

ALL AVAILABLE FOR AMSTRAD PC
SAGA
COMMODORE AM120
SPECTRUM

SEND CHEQUE/PCs for
return of post receive to:

SELEC
21 ALDRINGHAM ROAD, GATLEY, CHESHIRE SK9 4DP

TELE 061 458 7425

TELE 061 458 7425

TELE 061 458 7425

TELE 061 458 7425

TELE 061 458 7425

TELE 061 458 7425

TELE 061 458 7425

TELE 061 458 7425

OPEN 9AM TO 5.30 MONDAY-SATURDAY
MAIL ORDER & CREDIT CARDS WELCOME



HARDWARE

COMPUTERS

- IBM Amiga A500 with nearly £200 of free software & accessories £499.00
- IBM 486 Starter Pack with cassette recorder, joystick and £100 free software £179.99
- IBM 486 Computer only £129.99
- IBM 1541C Disk Drive with free software only £189.99
- Spectrump Plus 2 Computer with free joystick and software £139.99
- Atari 139XE Starter Pack with cassette recorder, joystick and free software £129.99
- Winenda Gamma Console with free Super Mono Bros game £99.99
- Sega Games Console with free "Heng" Crt game £99.99

COMPUTERS

- Atari 8205STX including over £100 worth of software and accessories £299.00
- Atari 8205STX + Mouse £259.00
- Atari 8205STX + Mouse + SP364 Drive £389.00
- Atari 1540C15 £189.00
- Atari Mega BT2 £299.00
- Atari Mega BT4 £299.00

MONITORS

- Mega ST4 console complete with SM120 High Res Mono Monitor and Now include Enter Charge £125.00
- Atari SM125 Mono 12" screen £109.00
- Atari SM125 Bought with computer £169.00
- Philips CM 8533 M95, 15cm Colour 14" PC lead £385.00

DISK DRIVES

- Atari SP124 8.8 Mbit Disk Drive £99.00
- Atari SP124 16Mbit Disk Drive £189.00
- Comant 16Mbit Disk Drive £189.00
- Comant 24Mbit Disk Drive £289.00
- Comant 32Mbit Disk Drive £389.00
- Super 20Mbit Disk Drive £389.00

ACCESSORIES

- 10 x 5.1 500DD Disks Wounded £10.95
- 10 x 5.1 500DD Disks Unwounded £12.95
- 10 x 5.1 500DD Disks Wounded £18.99
- 10 x 5.1 500DD Disks Unwounded £20.99

PRINTERS

- Mirco P 3P 135 £199.00
- Chicom 120-D £199.00
- Chicom 130-D £199.00
- Epson L2-400 £275.00
- Star NL-10 £275.00
- Star N234-10 printer + Sheet Feed £354.00
- Star N234-10 printer + Sheet Feed £379.95

SOFTWARE

10 BEST ATARI ADVENTURES

- 1 Phantasmia £34.95
- 2 The Pans £24.95
- 3 The Battle Tale £24.95
- 4 The Gold of Thieves £24.95
- 5 Aard & Bart £24.95
- 6 Omega Ranger £14.95
- 7 Space Quest £24.95
- 8 Knight City £14.95
- 9 Phantasmia £24.95
- 10 121W Water Street £24.95

10 BEST ATARI XT BUSINESS PROGRAMS

- 1 First Word Plus £79.95
- 2 VIP Professional £29.95
- 3 Sage Accountant Plus £29.95
- 4 Superbase Personal £29.95
- 5 Tdbase £29.95
- 6 Publishing Partner £189.95
- 7 K-Spread 2 £79.95
- 8 Tempus £29.95
- 9 Halloway £79.95
- 10 10-Data £29.95

10 BEST ATARI XT UTILITY PROGRAMS

- 1 Omega £99.00
- 2 Lattice C £29.95
- 3 Typewriter £24.95
- 4 Art Director £24.95
- 5 PC Data £24.95
- 6 Pro Base 8 Designer £27.95
- 7 Professional Screen Editor £27.95
- 8 Cool 3D £27.95
- 9 Easy Draw 2 £27.95
- 10 Bank Pack £27.95

All our software is marked at the recommended retail price but we give discount of 5% for Access/Visa sales or a full 10% discount for payment by Cash or Cheque

THE YORK COMPUTER CENTRE, 9 Davygate Centre, York YO1 2SU. Telephone: (0904) 641862

8/16 Bit Programmers

We are looking for good, new, programmes as our aim is to build up the largest shareware catalogue in Britain which caters for all types of machine. Therefore, if you have written any Utilities, Application, Educational or Game programmes, for any machine, we would like to see them.

Please send your tape/disk, with any instructions that are necessary, for appraisal or write for details to;

E.M. Distribution,
13 South Street,
Exmouth, Devon EX8 2SX.
Telephone (0395) 267734.

j.c.s.

☆ Atari 520 STFM - £399

Including starter pack

☆ Atari Entry Label PC - £499

Including starter pack

☆ Amiga A500 - £449

Including starter pack

☆ Sega Master Systems - £124.00

With laser gun & games

ALL HARDWARE AND SOFTWARE AVAILABLE NOW!

MAIL ORDER OFFER
4 Graham Street, Airdrie,
Scotland ML6 6BU
Telephone: (0236) 69874

HOMESoft

P.O. BOX 49
LEYLAND, PRESTON
LANCS, PR5 1DG

TOP QUALITY BRANDED DISKS
ALL COME READY NOTCHED

- 3.5" DS/DD D1C1 £9-68 per 10
- 3.5" SS/DD D1C1 £9-46 per 10
- 5.25" DS/DD 48TPI £4-50 per 10
- 5.25" DS/DD 96TPI £5-05 per 10

DATA TAPES 5PI x C15 £1-65, C7 £1-00
VIDEO TAPES E120x £2-30, E180x £2-50

STORAGE BOXES FREE

WITH BULK BUYING OF 100 DISKS OR MORE

MOONRAKER JOYSTICKS ONLY £4-95

PHONE FOR BULK DISCOUNT RATES
ALL ITEMS SUBJECT TO P&P OF 50p EACH
TELEPHONE 0772-452414

ACE

Collect it!

Missed some earlier issues of ACE? Don't despair. Copies can be despatched to your letterbox for just £1.50 each (postage free). Look at these highlights.

ISSUE 1 (Order code A120B1)

- FREE cassette containing COMPLETE games worth £8.00 - US Gold's BLUE MAX for the C64 and Ocean's GIFT FROM THE GODS for the Spectrum
- Which Console? A detailed comparison of the Nintendo, Sega and Atari machines and the software available for them
- Music: Into the Midi and a review of Casio's Midi Guitar
- Great playing tips on Guild of Thieves
- Barbican: Defender of the Crown and more
- Spool letters page!

ISSUE 2 (Order code A120B2)

- FREE color cassette containing the FIVE complete levels of the arcade smash BUBBLE BOBBLE (C64 and Spectrum versions)
- Buyer's Guide to budget software - 30 top titles listed
- Detailed playing guides to XOR and HITCHHIKERS, plus numerous others
- Features on recommended joystick, 3D graphics and your game-playing skills

ISSUE 3 (Order code A120B3)

- Detailed comparison of the Atari ST, C64, Amiga and Acorn Archimedes
- Buyers guide to strategy games
- Playing guides to Red Led, Skulduggery, Boulderdash, Drizzy and many more
- DigiPaint and Deluxe Paint III compared
- Introduction to Play by Mail games
- Great Computer Dealers

ISSUE 4 (Order code A120B4)

- Summer Christmas issue with free 1988 computer user's diary
- Games of the Future: An ACE investigation
- Game compilations compared
- Reviews of huge range of electronic keyboards
- Detailed notes on F-15 Strike Eagle, Indiana Jones and Spy Hunter
- Pokes for Super Sprint, Gauntlet, Jack the Nipper, 2 Renegade, Boulder

ISSUE 5 (Order code A120B5)

- Major investigation into games censorship
- The definitive comparison of flight simulators by professional pilots
- Games Creators: reviewed and analysed
- Graphics: The start of a series of how to do it articles
- Comparison of digital from less
- Great playing tips on Nabulus, Bobblefish, Terrapode, Drifter, Freddy Hartsen
- arcade game Double Dragon

ISSUE 6 (Order code A120B6)

- Fantastic issue, but whaddya know, there's no space left to tell you about it

How to order

Use one of the FREE POST order forms on page 125 (Pink Pages), quoting the relevant order code(s). Or just telephone us on 0458 74011 with your credit card details

The fabulous ACE binder

Order code A120BR



Don't just leave your copies lying around to collect the dust. Store them in this superb binder - gleaming black with the logo stamped in gold on the front and spine. Comes complete with wires to hold 12 issues securely. The cost? Just £4.50, post free. Order using the form on page 125ZZZ

TURTLESOFT

Turtle prices are the ones to judge the competitors by we are sure you won't find lower prices and overnight delivery, first class service at first class prices

AMIGA HARDWARE

Amiga	Model	Price
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00

** All Amiga 486 come with FREE Demo Software 3-4 discs - FREE - can vary **

AMIGA PERIPHERALS

Amiga	Model	Price
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00
Amiga 486	486 660	489.00

MOUSE MATS, SPECIAL PRICE £4.95

DISC CLEANING KITS, ONLY £4.95

AMIGA 500/1000 GAMES

Amiga	Model	Price
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00

AMIGA 500/1000 BUSINESS

Amiga	Model	Price
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00
Amiga 500	500 660	509.00

First: Send Cheques/P.O. or Visa/Access Details to the address below
Phone: Call 0478 501840 34 Hour service with your Visa and Access Details
Turtlesoft Dept ACE, Unit 3, The Old Malthouse,
Springfield Road, Grantham, Lincs NG31 7SE

Subject to availability, all items despatched within 24 Hours E.A.O.F.
Software & Small items sent 1st Class Post. Cheques require 7 days
for clearance

HARDWARE ITEMS MARKED * NOW SENT BY OVERNIGHT COURIER

PLEASE ADD £4.00 TO YOUR ORDER VALUE TO COVER THIS

Just because you don't see it, doesn't mean we haven't got it - Call for Details



RANDOM ACCESS

Once you've read your way through your latest issue of ACE – and digested all the features, game reviews, news and other equally satisfying sections of the magazine – it's probably time to pay a visit to your newsagent for more of the same. Should you happen to be an extremely quick reader however, you may have a few minutes to fill before the mad rush to buy the next ACE. This is when you'll appreciate our Random Access section – we've got fiendish puzzles, cryptic crosswords, mini-listings and cartoons to entertain – and possibly reward you. Because should you strike it lucky you could walk away with £25-worth of software – just for enjoying yourself! So don't waste any more time – get to it!

GET INTO PRINT!!

The cartoons appearing on these pages are drawn by one of ACE's resident artists Steve Spiner. Steve's always overworked, however, and this is where you come in – if you realise you've got the ability, time and most importantly the originality to be able to produce a couple of cartoons that'll give everyone a chuckle, then we'd very much like to see them. So get to it! But remember to keep them close!

Send your contributions to **RANDOM ACCESS** at the usual address. For the best chance of reproduction, your artwork should be in black on stiff white paper.

PUZZLE ENTRY FORM

NAME _____

ADDRESS _____

COMPUTER OWNED _____

I think the original order of the cards was

And the final order was

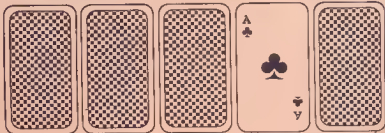
Send your answers to

PRIZE PUZZLE 2, ACE, 4
Queen Street, Bath BA1 1EQ

Closing date: May 1988

THE ACE PUZZLE No2

Set by Archie Medes



Puzzles can intrigue, infuriate and even delight – if you crack them. It's also got the chance of winning £25-worth of software for having your correct entry pulled from the hat first. Well, you're laughing aren't you?

Professor Otto Hex of the Institute of Advanced Mathematics has recently received the following communication from his colleague Professor Browze:

Dear Otto,
 Here is an interesting problem for you. I have five playing cards taken from a standard deck. They are the ace, two, three, four and five of clubs. I have shuffled the five cards and have dealt them

face up in a row and am now about to move them in the following series of operations:

1. Exchange the positions of the two cards either side of the ace
2. Exchange the position of the ace and the two
3. Exchange the positions of the two cards either side of the five
4. Exchange the four with the card to its immediate left
5. Exchange the position of the

two cards either side of the three.
 5. Turn all the cards, except the ace, face down

The cards are now as you see them here. Can you determine the order that the cards are now in (go from left to right) and also say how they were arranged at the start of the experiment (again left to right)?
 yours puzzlingly
 Browze

It didn't take Otto long to find the answers, but can you? Also, can you write a simple listing to get your micro to provide you with the answers?



ODD ACE FACTS

Steve Cooke started going bald when he was 13 ● Andy Smith is a trained cobbler ● This page was printed directly from an Apple Macintosh Xpress computer file that was 28K in length ● Rod Lawton worked in a slaughterhouse ● Andy Witton couldn't think of any ACE odd facts ● ACE was originally going to be called ICE but was then renamed Bilttar and finally just before the first issue went to press - ACE ● Pete Connor comes from Rochdale ● The people in the photograph below designed this issue of ACE - give them a big hand! ● Rod Lawton came 173rd in the Broad Oak Half-Marathon ● Xpress, the program used to lay-out and design ACE takes up nearly 500K ● Andy Smith used to live in Singapore - sometimes we think he still does ● Chris Anderson has an alghnan coat ● All the coffee in the ACE office is FREE ● Trevor Githam got engaged to the girl in the shop next door ● Chris Anderson got appendicitis immediately after seeing Bob Wade for the first time

Left to right: Angie, Julia, Gordon, Kevin, Trev (art editor) Ollie and Sely - the ACE Art Team



ACE PRIZE CROSSWORD 2

Set by Mips

The first correct entry taken from the postbag wins software worth £25.00. Closing date for entries May 10th.

The Ace crossword is cryptic. The answer might be an anagram, or formed from the end of one word and the beginning of another, or simply another word hinted at by the clue. Most - but not quite all - of the answers are computer-related.

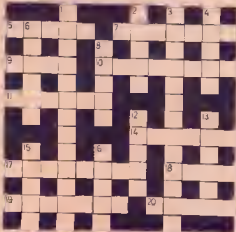
Across

- 5 Enc, lonely, clasps his computer copy (5)
- 7 Game body of fighting men (7)
- 9 Wear out whether it's hard or soft (4)
- 10 Room we, the magazine, make for a game (5,3)
- 11 Game seeker giving one the run around (6)
- 14 A paint developed by Ocean Games (3,3)
- 17 Mad rush made pets upset (8)
- 18 Break into system and get the chop (4)
- 19 Perphenal that's character forming (7)

- 20 Girl giving Amstrad software to Ma (5)

Down

- 1 Amusement provided by games in the last ACE (1,3)
- 2 Key-ldy (5)
- 3 Urban guerrilla from 13 (1,3)
- 4 'May the be with you' (5)
- 6 Micro - wrestling from Microprose (6)
- 8 Computer employers (5)
- 12 Rosel new characters for drive (5)
- 13 PC Come - new product from software house (6)
- 15 Rita playing on a PC (5)
- 16 Cleverly holding the bar (5)



CROSSWORD ENTRY FORM

NAME

ADDRESS

COMPUTER OWNED

PRIZE CROSSWORD 2, ACE, 4 Queen Street, Bath BA1 1EJ Closing date May 10th

S.D.C.

309 Goldhawk Road, London W12 8EZ

(OPEN 7 DAYS 10am - 7pm)

PRICE PROMISE

If you wish to purchase any product from our list and find that you can buy the same product cheaper from another mail order company, simply enclose the lower amount, stating the name of the other company and where you saw the advert. (It must be the current issue). Price Promise does not apply to other companies "Special Offers".

BUY BY PHONE
01-748 1222
01-995 3452
0525 71884

ENQUIRIES
01-748 3577

Title	Spectrum	Com64	Amstrad	Title	Spectrum	Com64	Amstrad	Title	Amstrad	Amstrad
Potion	D4 75	D4 75	D4 75	Gunslinger	D4 75	D4 75	D4 75	Crack	D4 75	D4 75
Out Run	D4 50	D3 75	D4 75	Sp 7 Spy Trilogy	D4 75	D4 75	D4 75	Backslings	D4 75	D4 75
Out Run II	D4 50	D3 75	D4 75	March Lord	D4 75	D4 75	D4 75	Capitan Blood	D4 75	D4 75
Protektor	D4 75	D4 75	D4 75	Hunt for Red October	D4 75	D4 75	D4 75	Intar	D4 75	D4 75
Rolling Thunder	D4 75	D4 75	D4 75	Football Director	D4 75	D4 75	D4 75	Mass	D4 75	D4 75
Black Lamp	D4 75	D4 75	D4 75	Genshin	D4 75	D4 75	D4 75	Seriel & Throne of the Falcon	D4 75	D4 75
Bedlam	D4 75	D4 75	D4 75	Super Hang On	D4 75	D4 75	D4 75	Proditor	D4 75	D4 75
Assured II	D4 75	D4 75	D4 75	Last Ninja	D4 75	D4 75	D4 75	King of Chicago	D4 75	D4 75
Tour de France	D4 75	D4 75	D4 75	Julianek	D4 75	D4 75	D4 75	Isotony Flight	D4 75	D4 75
Genshin	D4 75	D4 75	D4 75	Lords of Midnight	D4 75	D4 75	D4 75	Scip Plaque II	D4 75	D4 75
Vesuvius Road	D4 75	D4 75	D4 75	Election Action	D4 75	D4 75	D4 75	Het Fossil	D4 75	D4 75
Key of the Broom	D4 75	D4 75	D4 75	Avenger	D4 75	D4 75	D4 75	Leather Neck	D4 75	D4 75
Wizard Wars	D4 75	D4 75	D4 75	Friday 13th	D4 75	D4 75	D4 75	International Soccer	D4 75	D4 75
New Moon	D4 75	D4 75	D4 75	Shelley	D4 75	D4 75	D4 75	Frigit Night	D4 75	D4 75
Max II	D4 75	D4 75	D4 75	Moon Cresta	D4 75	D4 75	D4 75	Goldminer II	D4 75	D4 75
Impassible Mission II	D4 75	D4 75	D4 75	Sailing	D4 75	D4 75	D4 75	Crack Games	D4 75	D4 75
Morphine	D4 75	D4 75	D4 75	Championship Baseball	D4 75	D4 75	D4 75	Red	D4 75	D4 75
Hudson Moon	D4 75	D4 75	D4 75	Dumb	D4 75	D4 75	D4 75	Match 3	D4 75	D4 75
19 Foot Camp	D4 75	D4 75	D4 75	Hacker II	D4 75	D4 75	D4 75	Shadow Gate	D4 75	D4 75
Endure Race II	D4 75	D4 75	D4 75	Footballer of the Year	D4 75	D4 75	D4 75	Ultima IV or V	D4 75	D4 75
Sale Arms	D4 75	D4 75	D4 75	Hack Men	D4 75	D4 75	D4 75	Barbarian (PSY)	D4 75	D4 75
Tenali	D4 75	D4 75	D4 75	Dragons Lair II	D4 75	D4 75	D4 75	Terraplane	D4 75	D4 75
Vanguard Empire	D4 75	D4 75	D4 75	Dragons Lair II	D4 75	D4 75	D4 75	Hunt for Red October	D4 75	D4 75
IO	D4 75	D4 75	D4 75	Nemesis	D4 75	D4 75	D4 75	Wheat Cypriot III	D4 75	D4 75
Star Warriors	D4 75	D4 75	D4 75	Nemesis the Warlock	D4 75	D4 75	D4 75	Barbarian (PAL)	D4 75	D4 75
Tech	D4 75	D4 75	D4 75					King Quest Triple Pack	D4 75	D4 75
Gembot	D4 75	D4 75	D4 75					Dark Castle	D4 75	D4 75
A.T.F.	D4 75	D4 75	D4 75					Battle of Power	D4 75	D4 75
Tarmon	D4 75	D4 75	D4 75					Defender of the Crown	D4 75	D4 75
Bandwits	D4 75	D4 75	D4 75					Leadsword	D4 75	D4 75
Winter Olympic II	D4 75	D4 75	D4 75					Leadsword Tournament	D4 75	D4 75
Rampart	D4 75	D4 75	D4 75					Western Games	D4 75	D4 75
Beep Boy	D4 75	D4 75	D4 75					Flight Simulator I	D4 75	D4 75
All Word Games	D4 75	D4 75	D4 75					Society Days 7 or II	D4 75	D4 75
Airframe Ranger	D4 75	D4 75	D4 75					Crash Cars	D4 75	D4 75
Coastal Chaseway	D4 75	D4 75	D4 75					Music Studio	D4 75	D4 75
Acis I or II	D4 75	D4 75	D4 75					Shell Service	D4 75	D4 75
Gryzor	D4 75	D4 75	D4 75					Rollers	D4 75	D4 75
Comline School	D4 75	D4 75	D4 75					Wheeler	D4 75	D4 75
International Karate +	D4 75	D4 75	D4 75					Panetball	D4 75	D4 75
Pony Shark	D4 75	D4 75	D4 75					Sarcorn	D4 75	D4 75
Medals	D4 75	D4 75	D4 75					Franchiser	D4 75	D4 75
Basket Master	D4 75	D4 75	D4 75					Sarcorn	D4 75	D4 75
Rutan Ship	D4 75	D4 75	D4 75					Midol	D4 75	D4 75
Thunderbolt	D4 75	D4 75	D4 75					Mid Forester	D4 75	D4 75
Rampage	D4 75	D4 75	D4 75					Trinity	D4 75	D4 75
Masterkey II	D4 75	D4 75	D4 75					Two Times	D4 75	D4 75
Amnesia	D4 75	D4 75	D4 75					Miniball	D4 75	D4 75
Pink Panther	D4 75	D4 75	D4 75					Wakelinger	D4 75	D4 75
Trial	D4 75	D4 75	D4 75					Balloon	D4 75	D4 75
Project Stratos Fighter	D4 75	D4 75	D4 75					Minigames	D4 75	D4 75
Vanguard Empire	D4 75	D4 75	D4 75					Zork III or II	D4 75	D4 75
								Hacker I	D4 75	D4 75
								Hacker II	D4 75	D4 75

DISK PRICES D1=75 D2=79 D3=89 D4=1050 D5=1199 D6=1299
ANY GAME NOT LISTED PLEASE CONTACT US, FOR PRICES AND LISTS OF SOFTWARE

S.D.C. ORDER FORM

Please send the following titles. BLOCK capitals please!

Type of computer

Amount

Name

Address

Total Enclosed £

Tal. No.

Please make cheques or postal orders payable to S.D.C.
Prices include P&P within UK; Europe please add £1.00 per title
Elsewhere please add £1.50 extra per title

VISIT OUR SHOP
128 CHESTER HIGH ROAD W4
FOR FILES FROM £6.99

VISIT OUR NEW SHOP
18 MARKET SQUARE
LEIGHTON BUZZARD
BEDS

● **CBM 64** plus C2N cassette plus 2 joystick plus more than 100 original software (des all worth at least £500) will sell for £250 phone (0997) 22316 after 4pm and ask for John

● **COMMODORE C2N** data cassette, £300 worth of games music maker keyboard £250 on. Ask for sales Spectrum 48 cassette recorder joystick interface 100 games, laser basic games maker £75 Phone (2553) 674801

● **SPECTRUM 128** Atari £550 £650 of software hardware and magazines Most recent titles Quick sale needed so any offers considered Phone: 0992 32187 after 5pm ask for J.S. Doonan

● **48K SPECTRUM** data recorder, quickshot II joystick turbo interface £100 worth of software including magazines in mint condition. Sell for £90 Tel: 021 523 0471. All in original packaging

● **SEGA CONSOLE** Perfect condition Including Hang On Outrun Wonder Boy World GP Space Harrier Super Tunnix Choplher Rambo Black Belt Action Fighter, World Soccer £200 on Tel (081) 427 6323

Public health warning
Needless to say, we cannot be responsible for the availability of any particular entry in this section. If you respond, it's at your own risk

● **AMSTRAD MONO CPC 464** DMP200 Androm music joystick over £500 worth of games Total over £1050 sell £82000 PLUS Buy quick and get two boxes (BMX & Fiddling) and origin AFTER 10pm £550 5228

● **SPECTRUM Plus 2** 2 joystick printer with paper over £200 worth of software Will sell for £220 on. Very good condition Tel Jonathan Bray 01 946 2507 After 6:15pm

● **AMSTRAD 8128** with built in disc drive £100 worth of games and joystick £300 on Tel 0902 726404 after 4:30 60m in good condition only one year old

● **AMSOFT 3" CASED DISKS** 5 for £12, 10 for £21 95. Send cheques P/O to First Byte Software P/O Box 50 Yeovil Somerset BA20 1X5 Tel 0935 851295

● **SPECTRUM 48K** micro drive plus cartridge over £1000 worth of software Kompton joystick interface data recorder interface II complete input plus home computer course £280 on. Chis (0955) 752597

● **AMSTRAD 464** colour monitor, over £250 worth of games lots of mags and joystick worth £500 Sell for £300 on Phone Matt Dekeyn (0895) 295363 After 7:00pm

● **C64 tape deck** disk drive action replay 3 over £875 worth of software latest original software 2 joystick blank disk and notcher Worth £1200 bargain £300 on 01 383 9091

● **C64** disk drive C2N joystick and loads of software including lightpen speech and music utilities. Worth £500 bargain at £300! Phone Gary Chisholt

3337 for a full list of goods

● **PLUS 4 COMPUTER** C2N joystick and lightpen ideal for someone just starting in computing Also includes lots of software bargains £50 Phone Gary Chisholt 3337 for details

● **CBM 64** Cassette 1541 disk drive joystick music games software over 30 disks (1600 Gac Delander/Zoom Pever Gals) Over 20 spare disks 0722 750776 after 6pm no splitting £245 on

● **48K Gokur** data drive Miralge/Imagin MK4 54k Memory Upgrade Silicon disc 2 joystick books and manuals AA dual covers, 27 AA magazines plus 2 books AA Chest Model IS-86 CPM 2.2 disc, 3 blank discs Over £1500 games plus mystery line gift All over £2500 Sell for £400 or bid lower Contact Andy on 01 773-2938 (9-5)

● **CBM64** on 1541 disk drive 1701 monitor, with printer plotter £300 plus original disk and tape software and 100 blank disks, plus other items £450 the lot Phone Conway Island 69699

● **CBM 64 C2N** cas 1541 drive MPB 603 printer desktop disk latest £500 of software freeze frame mouse modem £450 all close others Phone 0266 682482

● **ORIGINAL ST** games for sale Atari ball Star Wars, Rampage etc Phone Julian on 0952 850554

● **BBCBDSI 2** Acorn DFS twin 40/80 drives Data Recorder, Wordwise Disc Doctor ROMS plus many games and business software (25 disks) Everything in original packaging, all manuals lends accessories £500 (0702) 611448

● **C64** Drive printer Final Cartridge Lightpen and over 150 games on disc/cass Sell for £350 on or sell separately Excellent computer Phone 01 800 5085 ask for Gary of Paul

● **COMMODORE 64 POKES**, booklet with over 125 pokes in it for £2.00 Send coins, cheques and P/Os to Howare Look 28 Chislehurst Road Arlesey Beds SG15 8SP

● **CBM 64**, 1571 disk drive and 1701 monitor all good working order Will split £250 for all three or £100 per individual item Tel Reading (0734) 865622 after 6:30 evenings

● **CBM 64** Excelsior II, disk drive two tape decks lots of software joystick magazines Can deliver 30 miles radius £240 Tel Newbury 49343 after 6pm

● **ATARI 1040 STF** mono monitor 1 Meg disk drive mouse modulator, fast basic, 580 of games as new phone Bognor (0895) 688 983 afternoons £450 on

● **COMMODORE CPC 6128** with colour monitor Multiface 2 non-board card with books and software Worth £850 Sell for £280 Tel Bilmer 0744 894006 anytime

● **SPECTRUM** + hundreds of games proper data recorder all the loads interface 2 Kampton equipment Will sell for £250-£300 or swap for an Atari

STFM or an Amiga 5000 must have some games Tel Simon 0242 820403 after 4pm

● **SPECTRUM 48K** plus modem ZX printer Kampton interface booklet data recorder 100 original games and utilities many classics Worth over £700 Will sell for £100 on Tel (0375) 379129

● **REVIEWER REGRETS** must upgrade to 16-Bit Amstrad CPC 6128 (mono), must go Piles of disc/tapes (games utilities business) Multiface/Photo text ROM/Multiface etc £200 Tony Bridge 01 564 7839

● **CBM 64** Data cassette £50 of books £500 brand new games plus 30 others (originals without instructions) Programming courses will sell for £110 29 Linton Avenue Whitstable Kent CT16 1RX

● **CBM64** Datasette normal cassette interface double cassette interface games joystick 80magazines books £110 on. Brother printer £70 on Everything fully tested Tel Scarborough (0723) 356853

● **SINCLAIR SPECTRUM 123** tape set joystick interface, £450 worth of games £240 only also sells multi system £65 worth of games £120 only Both VGC Tel 061 445 0529

● **AMSTRAD 464** green monitor, TV modulator quickshot turbo joystick and 150 games all for £200 All in good condition Phone and ask for Oliver on 01 452 5877

● **C6M 64** disc drive music maker modem over tape decks Many mags zines joystick Ring 01 688 8361 £250 on

● **128K plus 2** Quick shot II plus joystick and interface Sinclair joystick £400 latest games 650 mags All worth £800 Sell for £200 on Call 01 847 3778 and ask for Leo Cook

● **COMMODORE 128** with 1570 disk drive 1531 datasette centronics interface freeze machine, books and lots of original and recreational software on disk and cassette Phone (0487) 842042 Price £350 on

● **LEATHER GODDESSES** £10, Bridge Player 2000 £12, Attrib 01 P. Perry Mason £8 Skullduggery £7 Cive 88 Brit Lane, Berkhamshead, Herts HP4 1DR

● **C64 1541C** disk drive Brand new still under guarantee unwanted but Worth £200 Will sell for around £115 Contact Christian Simpson, 25 Kew Gardens Road Richmond Surrey, TW9 3HD Phone 01 948 0319

● **ATARI 1048 STF** with £400 of software all worth £200 will sell for £500 Attribed Phone 01 452 5382 Ask for Flit 1 after 6pm

● **SPECTRUM Plus 3** multiface 3, joystick cassette lead light pen 10 disk disks, lots of games on disk and tape over 20 magazines £270 on Phone Hatfield 01 728 after 6pm

● **C64 1541** drive datasette modem,

£1000 software including gunship on disk plus ask Z2AP64 sell for £350 Phone Graig on 01 888 5190 after 5:30 pm

● **SEGA GAMES** Out Run £12.50 Space Harrier £12.00 Choplher £9.50 Zaxxon £200 Secret Command £9.00 Sky Ship £9.00 All games as new 11 pcy postage Phone Kenny 031 339 1758

● **AMAZING OFFER** C64 datasette two joystick nearly seven original games Gunship Princess Elite Viet Nam Fourth Protocol Dracula Outrun Super Space Many more items Phone John 554 4058 £200 No Offers (Iord)

● **CBM64** poses booklet contains over 1300 poses including latest games. Send cheques P/Os wrapped copies for £2.00 to Howard Look 28 Chislehurst Road Arlesey Bedfordshire SG15 6SP

● **1 YEAR OLD BBC MASTER** plus single game plus Panasonic KXP1081 dot matrix printer plus 20 blank disks in good condition £399 Phone Richard on 01 431 3339 First Come First Served

● **CASIO C2101** midi synth with P3 U and RAM cartridge A true bargain at only £200! Phone Dene 01 444 7313 (North London)

● **SPECTRUM Plus 3** multiface 3 2 joystick data recorder inc leads over £200 worth of software still under guarantee £400 Phone Southend (0702) 218594

● **ST PD** for nearly free PD games Demo's utilities £2.50 each and 5AE to Lan Vae Sant Ramroas Viscage Old castle Avenue Bradwell Newcastle Staffs ST5 8DG Tel (0782) 836970 after 5pm

● **CBM 64** accelerator plus disk drive datasette simula case freeze machine £350 worth cassette software 85 disk games zines joystick mags plus books, 400 poses collection £250 will split Phone Graham (08277) 63683

● **ATARI 520 STF** One meg upgrade one meg drive microcass colour monitor plus over £1000 of latest software Could split White to A Chovin 57 Wendlefield Street Stoke on Trent, ST6 1EH

● **COMMODORE 64 1541C** disk drive cassette recorder Action Replay MK4 £500 of games mags Worth 8850 seller £250 or swap for Atari STF or Amiga £250 Tel 061 442 7267

● **COMMODORE 64 C2N** datasette over £500 worth of originals carry case mags, manuals, joystick all leads worth over £700 sell for a minimum of £190 Contact Steve on 031 337 1047

● **WIPEOUT** ST disk MAGAZINE full of reviews, programs, letter news etc only £3.50 Please send cheque payable to Paul Ellsmay, 97 Oxford Road, Runcorn Cheshire WA7 4NY

● **AMSTRAD CPC 6128** colour 3 joystick 64 games multiface 2, mouse printer joystick tape recorder books over 30 magazines over £1200 software (disks) Many extras Worth over £2000 Only £600 Phone (0277) 454520

● **CD4** fully boxed deluxe joystick over £600 of top original games. Into to Basic Mega posters. hats £290 and Tel James on (0628) 70331 after 4pm Excellent Condition

● **CBM 64** C2N 1541 d drive aspen Pro5000 cheater. Must Make: Mega over 300 games on disk and tape. sell for £400 or swap for Amiga or Alt. Sell with more. Phone Tony 0693 21482

● **ATARI STFM** 3 months old under guarantee £200 software joystick maps disc copier, mouse mouse mat. Worth £500 sell for £350. Phone Simon 021 788 3796 after 5pm

● **SEGA SYSTEM** excellent condition 6 months guarantee. 14 games plus light phase worth over £300. Will sell for £210. Phone 01 751 1134 after 6pm for Colin

● **SPECTRUM 128** plus recorder, interline joystick, manuals plus 30 games. Includes ATF Combat School. Garfield 6 Paks and others. Just £125 if interested phone: S&B 01 692 3244

● **SPECTRUM 48K** data recorder, alphascan printer, current speech keyboard joystick, interface loads of games, maps and printer paper. Will sell for £150 only. Phone Alex West (GI Hedham) 095 362 612

● **ONE SPECTRUM 48K** plus 2 joys ticks, tape recorder 70 games books, maps, leads, power supply. Includes Outrun Microhit. Head Over Heels £150 and Contact Side Gonn 1 Hill View H-U-O Herefordshire Tel 0566 611799

● **CASIO C201n** and synth Full midi scale. Excellent condition. boxed with manuals and more leads. Superbly versatile synth. £175 Tel. Matthew after 5.30pm (Leeds) 0532 405598

● **ACORN ELECTRON** OVER £200 games in good nick. Asking £100 for it. Write to Sam Hutchins, 75 Flask Walk London. NW3 1ET

● **COMMODORE 64** 1520 printer plotter and freeze frame. Good condition. Over 150 games and cassette deck. Please contact C Yates. 143 Arthur Road Windsor. Berks or phone Windsor 669214. Price £130

● **COMMODORE 64** cassette, mouse, joystick, light pen, reset switch and over 3500 games and cartridges. Also 200 blank tapes included. £240. The lot. Phone Adam Madsen (0622) 62881 After 3.30pm

● **30 SPECTRUM 48** GAMES all leads, cassette recorder, double joys ticks, interface, cheatkit joystick, all still boxed £35. Tel Ipswich 831359

● **CD4** with new case, datestet 1541c with desdemon Action Replay 30. Final cartridge 2 software on tape and disk. Arrives at £250. Buyer collects or pay P.P.P. Ring Michael after 6pm on 0245 612442 now!

PEN PALS

● **STOWNER** wishes to swap his and tips write to David 33 Sunningdale Road Rannheim Essex RM13 7BD or phone 20667. All calls and letters answered

● **ST** penpals wanted. Ring 763761 and ask for Steven or write to 40 Kingsland Fairview Estate Kings Lynn Norfolk, PE30 4PF. Ring between 4pm and 6pm weekdays

● **COMMODORE 64** owner wants penpals anywhere in the world to exchange his tips, pokes etc. All letters answered. Write 200 14 Salford Ave. Newburgh by Sea Northumbria. NE64 8RH. England

● **AMIGA USER** seeks Penpals to exchange hints and solutions. All letters answered. Write to Mel at 54 Cloughton Ave. Crewe, Cheshire CW2 6EZ. Phone 216543

● **AMIGA** contacts wanted. Write to Jon Parson Canon Hall University Park Nottingham NG7 2RD

● **ST** asks people over 18. Interests SF, Cobol C and adventures. Write to F. Heeders P.O. Margaret St 9 4737 HW Willemstad, Netherlands

● **HELPI** Spectrum owner 13. male wants to swap pokes and write about other things. Guaranteed reply. Gareth Campbell. 157 Lettremore Balkie Ballynary Antrim BT42 2EK Northern Ireland

● **AMIGA OWNER** recently upgraded from humble origins wishes to contact other Amiga owners to exchange related programs. Interested? Contact Paul Ireland. 15 Grove Road, Cheshamford Essex CM2 7L (0245) 355114

● **ATARI ST** penpals wanted from around the world to swap hints, tips etc. five all games. Guaranteed reply. Write to: Colin Campbell. 10 Finaghy Park North, Belfast. Northern Ireland BT10 0HG

● **AMIGA ATARI STOWNER** wants to swap tips etc. Write to Staronewicz J-Michel 17 Rue Mare Dandale 78190 Yvelot France

● **ATARI ST CONTACTS** wanted from all over the world. Guaranteed reply. Write to Nick Johnson 18 Scholes Street, Castleton Rochdale Lancs OL11 2SY

● **AMIGA AND C64 OWNER** wants penpals worldwide to swap info etc. disc only. All letters 100% reply. Write to Desmond Graham. 21 Windsor Drive Baltes BT9 7TH, NI, Ireland

● **AMIGA OWNERS** wish to hear from other owners from all over the world. Write to the H.C.S. at 31 Havencrest Drive Leicester LE5 2AJ

● **CDM 64** contacts wanted on disk only. Write to Leigh Ashworth, 9 Badger Close, Stables Fields, Runcom WAT 20W. Tel. (0928) 71 6 475 after 12pm

● **ATARI STOWNER** needs penpals to swap tips etc. promised reply. Write to Karen 60 Heathshouse, Trowbridge Wilt BA14 7JT. As soon as possible

● **ST PENPALS** wanted any age or sex. Must like good music, demos and new order and the damned. Write to Andy 56 Ave Vivian, Farnborough Houghton Le Spring. Tyne & Wear DH4 6HY

● **ST PENPALS** wanted from all over the world to swap tips etc. All letters answered. Write to Mark 48 Greenway Road Heath West Glamorgan South Wales SA11 1HG

● **ATARI ST** contacts wanted. Write to Jon Hampson 155 Queens Drive Northwich Cheshire CW5 3UJ. Write soon!

● **FEMALE PENPALS** wanted worldwide to talk about absolutely anything. 1cm 18 and miss. Interested computers, music, videos etc. Contact Stewart Walms 6 Worthington Way Colchester Essex, CO3 4JZ. England

USER GROUPS

● **MSX LINK** the Spanish gift of Link subscriber is monthly newsletter for all MSX users (anywhere) with hints, tips, reviews, etc. Membership is only £6 per year. Cheques, Q. payable to MSX Link, and for MSX Link, AGS, North Lodge, Calistolia Road, Andis, Llanfair, Rhodri, ML5 8PL. Tel. (0929) 84045 after 5.30pm weekdays

● **MSX Computer Tape** (Monthly) Send C15 tape plus C1 50. Send no tape and £2.50. Includes listings, magazines, cheat, tapes, drive, walters & hints. Phone Robert after 4pm 0424 714116. 47 Redwood Road, Hasling TN38 8DW. UK only for 32K plus

● **ST IRELAND** Free newsletter and details of library. Only dedicated ST Users. P.D Software wanted and sold. Contact: Mark Kinsella, ST Ireland, Johnstown Sea Road Arklow Co. Wicklow Ireland

OTHER

● **AMSTRAD** Worldclass Landerboard (Tape version) putting tape, Send £1 plus S.A.E. and blank cassette for mailed disc to 52 Angle Village, Penmore, Dyfed. SA71 5AX for special program and useful tips

● **ST OWNERS** send up to 10 pictures to be digitised. Work returned on 3.5 inch disk. Steve Dagen, Penmore, Tel. 017 67 0730 for D. Simon 6. Acobry Cliff, Cysyllt, Bromwich, Br. mingham B35 5TD

● **SWAP** a CDM 54 with 2 joystick, reset £200 games. C2N recorder plus maps. Cost over £1000 for Amiga 500. Phone 833307. Steven 17 Sharp Crest, Heathfield, Nr. Newton Abbot, Devon TQ1 2PS

HOW TO PLACE YOUR ENTRY

All you have to do is send off the form below, together with your payment. Entries to the Pink Pages cost just £2.50 each (Except for Helpline which is free)

- The maximum is 20 words except for Helpline (Helpline entries can be extended to 100 words max - use another sheet of paper if necessary)
- The service is NOT open to trade advertisers
- We will print your advertisement in the first available issue
- Entries which could be interpreted as encouraging software piracy will not be accepted

ENTRY FORM

POST TO: ACE PAGES, Future Publishing Ltd, 4 Queen St, Bath, Avon BA1 1EJ

Please place this entry in the next available issue of ACE.

Name

Address

Category of entry:

Helpline For Sale Wanted Pen Pals User Groups Other

Method of payment: ACCESS - VISA - CHEQUE - P.O.

Credit card no.

Exp. date

Please make out all cheques and postal orders to Future Publishing Ltd

Write your advertisement here. Use word per box. Include your name, address and phone number if you want them printed

THE BLITTER END...

ACE EDIT COMPETITION RESULT

Winner of the ACE EDIT Competition was Mr. **Peter Cook** of Broomhall, who came up with the best answer to our following reader's letter:

Dear ACE,

I am having a problem. I cannot get my disk version of *Elite* to load into my Sega Console. I am getting desperate. Can you help?

Peter advised that:

"As the saying goes, 'you can't fit a square brain into a round hole and it's impossible to fit a disk into a Sega Console.'"

Peter will now get the pleasure of editing a whole column page in a forthcoming issue.

Horrorable mentions go to **Iain Lawson** of Walkertown, Scotland, who said 'Simply roll up the disk, insert it into your left ear, and the resulting warbling improves conductivity when the disk is loaded (honest)'. **Tyrene Davies** of Llanidloes, Wales, who said that 'At the very moment there is a compatibility problem between Sega and disk systems but Finland are promoting a Segatisation of Elia in 2010'. **Adrian Ward** of Blackpool with 'Dear Mr. Wiley, please fit in this 'Kidney Donor Card' and I will get back to you.' and **Paul Holdaway** from Stockport, who said 'Certainly, First, disks on the whole tend not to load into Sega cartridge slots, so a) throw away your disk, and b) throw away your Sega Console. Now now, let's not be

AN OOPS! AT THE RACES

Probabilities are lanky things as any mathematician will tell you. A debate's been raging in the pages of *Computer Guardian* recently over a probability problem involving gold and silver coins, and there's no sign of a solution the readers can agree on.

Classic probability bafflers are lent a penny. How about the pie restaurant where Apple is probably better than Blueberry, Blueberry's probably better than Cherry but when Apple and Cherry are all that's available Cherry is the best bet. (It's possible, honest)

Not satisfied? Then try this one: you buy a pack of cards, and a friend bets you £10 that along with all the black and red cards you'll find at least one green one. You start turning the cards over and each red or black card you turn makes you feel safer because it's one less that could have turned out green. Then you get to a blue card. Now that's still another card that could have been green and isn't, so it's got to make your chances of winning even better — hasn't it? Like I say probabilities are lanky things.

All of which is by way of an excuse for an OOPS! or two in our Dead Cert feature last month. The beggie was (probably) the claim made for D'Alembert's Method that it could increase a gambler's returns on an even or better chance.

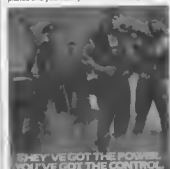
Firstly the system seems to do worse than a fixed bet once your chances get much above even, and secondly there's a strong school of thought in the offices here that no betting system can actually increase your returns in the long run anyway. A classic case in point is the Martingale system, where you bet double your stake if you lose and return to your original stake if you win. On paper it looks like a sure-fire winner provided you end your run on a win, you'll make a profit of one non per win regardless of how many times

you lost.

In practice gamblers run out of credit or reach the house limit so they can't always hang on for that final win — and when that happens to the Martingale better he goes down for a bundle! We're not quite sure how D'Alembert's method shapes up here, so we'd suggest you consult your nearest professor of applicable maths before using it in anger.

MID-AIR COLLISION

If you thought the computing business was full of numbers and letters just waiting to confuse the uninitiated you should try the aircraft industry. It isn't the ASRAAMs slung underneath your YF-22A ATF it's the RWR on your GR Mk1, or even the HUD on your F-16. Small wonder then that poor old EA (not an aircraft at all but software firm Electronic Arts) should get mixed up on one of their interceptor press releases. The on-screen combal fight sim (check it out in previews on p18, if you haven't already) lets you take to the skies in an F-16 Falcon or F-18 Hornet. Or an F-16 Hornet indeed. Or even an F-18 Falcon. Look, there are these two American planes and you can fly either of them, right?



OLLIE, FAWN AND...LANCE?

Entertainment as an instrument of US foreign policy is never a pretty thing folks, but this one really is a bit over the top. You thought *Raid* over Moscow was in poor taste? You thought *Green Beret* was a bit out of line? Well how about Konami's latest Nintendo cartridge for the American market. It looks like *Gyroz* it sounds like *Gyroz* and it's even got the same box artwork as *Gyroz* — but it's actually named *Contra*. Does it have atrocity sequences, we ask ourselves? Do you have to get a bill through Congress before you can pick up extra weapons? Will the 32nd Airborne save your bacon when you get in a fix? We think the public should be told.

ADVERTISERS INDEX

Ashcom	103	JCS	114	Selec	113
Atari	103	Jada	114	Shekhani	113
Byteback	107	KAM Computers	114	Silica Shop	103
CBS	100	KJC	100	Storn	105
Castle	104	Light Speed	100	Strategic Plus	105
Compart	35,45	MPC	110	Sunaro	101
Data/byte	20	Mail-Centa	105	Telegames	110
Digital Integration	9	Martech	110	Talcomsoft	112
Electronic Arts	13	Mastertronic	113	Timesoft	112
Evasham	106	Megabyte	113	Turtlessot	102,115
Firebird	114	Megabyte	113	US Gold	112,29,58,61
Go	49	Mirrosoft	25	Video Vault	111
Greenlit	14,30	Ocean	118	Wright Computing	47
Homesoft	114	Palace	80	Worldwide	112
		SOC	118	York Computer Centre	114

WE ARE THE CHAMPIONS

ALL THESE CHART TOPPING HITS



I, MURDER

On the edge of the world of the imagination, I, MURDER is a game that is both a challenge and a thrill. It is a game that is both a challenge and a thrill. It is a game that is both a challenge and a thrill.



RAMPAGE

The game where the monster goes wild. Rampage is a game where the monster goes wild. It is a game where the monster goes wild.



SUPER SPIN

Super Spin is a game where the car goes wild. It is a game where the car goes wild. It is a game where the car goes wild.

AMSTRAD
COMMODORE
SPECTRUM

IN A SINGLE GIANT PACK

ONLY
£9.95

ocean

OUT NOW!

COMING SOON...



**...the Hottest, Meanest
Machine you've ever seen...**



**ATARI
GAMES**